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Institute of Management & Technology

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Reference Material for Three Years

Bachelor of Economics (Hons.)

Code: 216

Semester-III

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Three Years Bachelor of Economics (Hons.)

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Semester – III

INTERMEDIATE MICRO ECONOMICS-I (201)

UNIT 1: MARKET STRUCTURES

Monopoly Market

The term Monopoly means 'alone to sell'. In a monopoly market, there is a single seller of a particular product with no strong competition from any other seller. In other words, monopoly is said to exist when one firm is the sole producer or seller of a product which has no close substitutes.

Features:

1. Single Seller of the Product

In a monopoly market, usually, there is a single firm which produces and/or supplies a particular product/ commodity. It is fair to say that such a firm constitutes the entire industry. Also, there is no distinction between the firm and the industry.

2. Strong barriers to entry

Another feature of a monopoly market is restrictions of entry. These restrictions can be of any form like economical, legal, institutional, artificial, etc.

3. No Close Substitutes

Usually, a monopolist sells a product which does not have any close substitutes. Therefore, the cross elasticity of demand for such a product is either zero or very small. Also, the price elasticity of demand for the monopolist's product is less than one. Hence, in the monopoly market, the monopolist faces a downward sloping demand curve.

4. Price Maker

Since there is only one firm selling the product, it becomes the price maker for the whole industry. The consumers have to accept the price set by the firm as there are no other sellers or close substitutes.

SOURCES AND CAUSES OF MONOPOLY:

There are a number of different factors that can cause a monopoly to arise. However, all of these factors essentially have to do with barriers to entry. Thus, in the following paragraphs, we will look at the three most relevant causes of monopoly markets:

1) Ownership of a Key Resource

A firm that has exclusive control or ownership of a key resource can restrict access to that resource and establish a monopoly. The limited availability of the key resource will make it impossible for new sellers to enter the market. Although this factor is important in economic theory, monopolies rarely ever arise for this reason in reality anymore .Mainly because most resources are available in various regions across the globe.

2) Government Regulation

The government can restrict market entry by law (e.g. through patents or copyright laws), which may result in a monopoly. Governments usually do this to serve the public interest, because these regulations promote innovation as well as research and development (R&D). The idea behind this is that firms can be rewarded for their R&D efforts by getting exclusive rights to sell their product.

3) Economies of Scale (i.e. Natural Monopoly)

In some industries, a single firm can supply a good or service at a lower cost than two or more firms could. We call this a natural monopoly (because it arises without government intervention). A natural monopoly can arise in industries where firms face high fixed costs but are able to realize significant economies of scale over the relevant range of output. Those circumstances result in decreasing average total costs as output increases, which makes it more difficult for new firms to enter the market. The market for electricity is a common example of a natural monopoly.

NATURE OF DEMAND AND MR CURVE UNDER MONOPOLY:

The demand curve facing an individual firm under perfect competition is a horizontal straight line as the level of prevailing price of the product. A perfectly competitive firm is a mere quantity adjuster; it has no influence over price.

But in the case of monopoly one firm constitutes the whole industry. Therefore, the entire demand of the consumers for a product faces the monopolist. Since the demand curve of the consumers for a product slopes downward, the monopolist faces a downward sloping demand curve.

Consider Fig. 26.1. DD is the demand curve facing a monopolist. At price OP the quantity demanded is OM, therefore he would be able to sell OM quantity at price OP. If he wants to sell a greater quantity ON, then price to the OL. If would he restricts his quantity to OG, fall price will rise to OH.Thus every quantity change by him entails a change in price at which the product can be sold. Thus the problem faced by a monopolist is to choose a price-quantity combination which is optimum for him, that is, which yields him maximum possible profits.

Demand curve facing the monopolist will be his average revenue curve. Thus, the average revenue curve of the monopolist slopes downward throughout its length. Since average revenue curve slopes downward, marginal revenue curve will lie below it. This follows from usual average- marginal relationship. The implication of marginal revenue curve lying below average revenue curve is that the marginal revenue will be less than the price or average revenue.

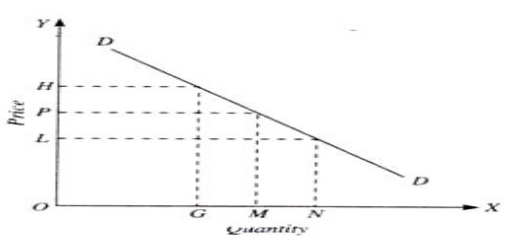


Fig. 26.1. *Demand curve of the monopolist slopes downward.*

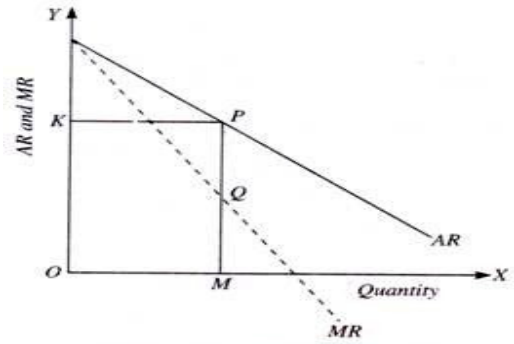


Fig. 26.2. *Average and Marginal Revenue Curves under Monopoly*

When monopolist sells more, the price of his product falls; marginal revenue therefore must be less than the price. In Fig. 26.2 AR is the average revenue curve of the monopolist and slopes downward. MR is the marginal revenue curve and lies below AR curve. At quantity OM, average revenue (or price) is MP and marginal revenue is MQ which is less than MP.

Average and marginal revenue at a quantity are related to each other through price elasticity of demand and in this connection we derived the following formula:

$$MR = AR\frac{(e-1)}{e}$$, where e stands for price elasticity.

Since AR is the same thing as price

Therefore, $$MR = \text{price}\frac{(e-1)}{e}$$

or $$\text{price} = MR\frac{e}{e-1}$$

Since the expression e-1/e will be less than unity, MR will be less than price, or price will be greater than MR. The extent to which MR curve lies below AR curve depends upon the value of the e – 1/e fraction.

The monopolist has a clearly distinguished demand curve for his product, which is identical with the consumers' demand curve for the product in question. It is also worth mentioning that, unlike oligopolist or a firm under monopolistic competition, monopolist does not consider the repercussions of the price change by him upon those of other firms.

Monopoly, as defined here, requires that the gap between the monopoly product and those of other firms is so sharp that change – in the price policies of the monopolist will not affect other firms and will therefore not evoke air readjustments of the policies by these firms.

The Price-Output Equilibrium under Monopoly!

Monopolist, like a perfectly competitive firm, tries to maximize his profits. Profit maximization assumption on which is based the equilibrium analysis of the perfectly competitive firm is also taken to be the most valid assumption about the behaviour of the monopolist too.The motive of monopolist is the same as the motive of the perfectly competitive firm, that is, both aims at maximizing money profits. We thus do not attribute any more sinister motive to the monopolist. If the results of monopolist' behaviour on the basis of profit maximization motive are different from that of the firm

under perfect competition, it is not due to any more sinister motive of monopolist but due to the circumstances arid situation in which he is placed.

The monopolist will go on producing additional units of output so long as marginal revenue exceeds marginal cost. This is because it is profitable to produce an additional unit if it adds more to revenue than to cost.

His profits will be maximum and he will attain equilibrium at the level of output at which marginal revenue equals marginal cost. If he stops short of the level of output at which MR equals MC, he will be unnecessarily forgoing some profits which otherwise he could make.

marginal revenue is equal to marginal cost at OM level of output. The firm will be earning maximum profits and will therefore be in equilibrium when it is producing and selling OM quantity of the product. If he increases his output beyond OM, marginal revenue will be less than marginal cost, that is, additional units beyond OM will add more to cost than to revenue.

Therefore, the monopolist will be incurring loss on the additional units beyond OM and will thus be reducing his total profits by producing more than OM. Thus he is in equilibrium at OM level of output at which marginal cost equals marginal revenue (MC = MR).

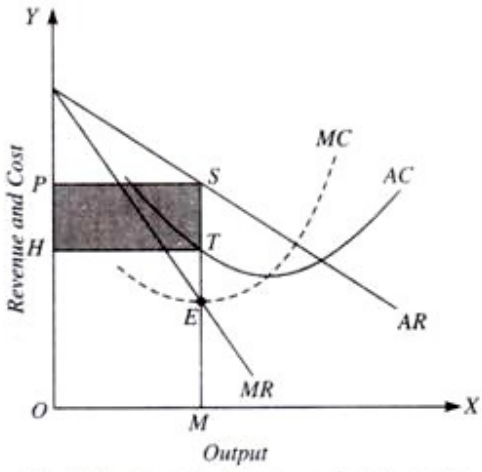


Fig. 26.3. *Firm's Equilibrium under Monopoly: Maximisation of Profits*

MONOPOLY EQUILIBRIUM AND PRICE ELASTICITY OF DEMAND:

Monopoly equilibrium will always lie where price elasticity is greater than one if marginal cost is positive. We know that at the middle point R of the straight-line demand or AR curve, elasticity is equal to one and corresponding to this unit elasticity point, marginal revenue is equal to zero.

Below the middle point R on the average revenue curve, elasticity is less than one and marginal revenue is negative. The equilibrium of the monopolist, will never lie below the middle point of the average revenue curve AR as over this range, marginal revenue becomes negative and total revenue (TR) decreases as is evident from the falling the TR curve beyond CW output in the bottom part of Fig. 26.4.

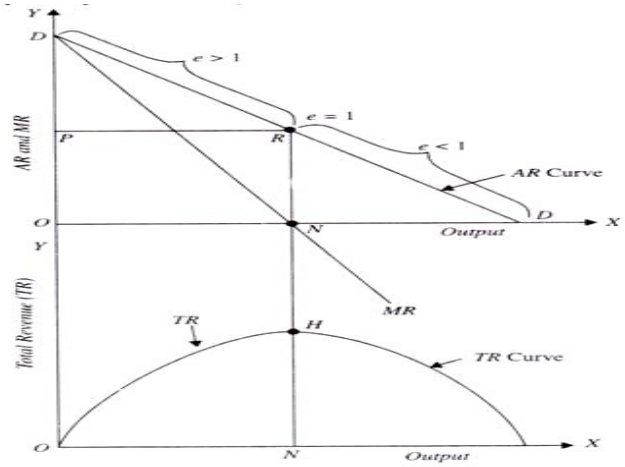


Fig. 26.4. *Monopolist cannot be in equilibrium at a level of output where elasticity of demand is less than one.*

Therefore, no sensible monopolist will produce on that portion of the demand or average revenue curve which gives him negative marginal revenue, that is, which reduces his total revenue, while the production of additional marginal units of output adds to his total cost.

Monopoly Equilibrium in Case of Zero Marginal Cost:

There are, however, some cases where marginal cost is zero, that is, it costs nothing to produce additional units of output. For instance, in case of mineral spring, cost of production of mineral water is zero. Furthermore, in the very short period when a product is already on hand in excessive amount, it is not relevant to consider cost of production while determining the quantity of output to sell.

LONG RUN EQUILIBRIUM UNDER MONOPOLY:

In the long run, the monopolist will make adjustment in the size of his plant as shown in fig-26.5. The monopolist would choose that plant size which is most appropriate for a particular level of demand. He will be in equilibrium at the level of output where given MR curve cuts the longrun MC curve. At equilibrium, MR=LMC=SMC; SAC=LAC and P>LAC.

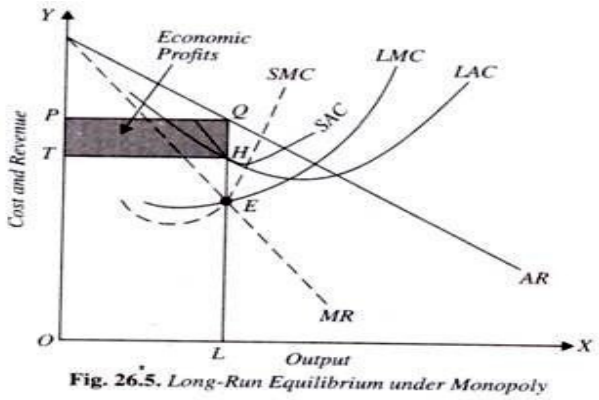


Fig. 26.5. *Long-Run Equilibrium under Monopoly*

WELFARE LOSS:

We shall now try to measure the net welfare loss due to monopoly or inefficiency of monopoly.

In Fig. 11.20, the price-output solution under perfect competition is E_c (p_c, q_c) and that under monopoly is E_m (p_m, q_m). The level of output of the perfectly competitive industry is the efficient level of output because here the willingness to pay for an extra unit of output just equals the cost of producing the extra unit (p = MC).

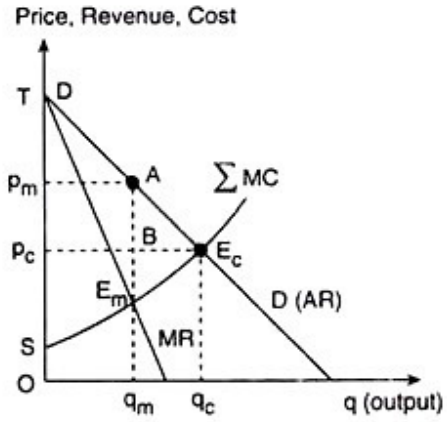


Fig. 11.20 Inefficiency of monopoly

Under monopoly, on the other hand, activity stops at a point where p is greater than MC, i.e., the willingness to pay for an extra unit is greater than the cost of producing the extra unit. That is why the monopoly output level is inefficient. It appears, therefore, that as we move from perfect competition to monopoly, the surplus equal to $\square p_c p_m AB$ is transferred from the consumers to the monopolist producer. We cannot evaluate the net gain or loss in welfare, if any, that would result from this transfer unless we are provided with some extra value judgement to overcome the problem of interpersonal comparison of utility.

Price Discrimination:

Price discrimination is a selling strategy that charges customers different prices for the same product or service, based on what the seller thinks they can get the customer to agree to. In pure price discrimination, the seller charges each customer the maximum price he or she will pay. In more common forms of price discrimination, the seller places customers in groups based on certain attributes and charges each group a different price.

Price discrimination is most valuable when the profit that is earned as a result of separating the markets is greater than the profit that is earned as a result of keeping the markets combined. Whether price discrimination works and for how long the various groups are willing to pay different prices for the same product depends on the relative elasticities of demand in the sub-markets. Consumers in a relatively inelastic submarket pay a higher price, while those in a relatively elastic sub-market pay a lower price.

[**Important:** Price discrimination charges customers different prices for the same products based on a bias toward groups of people with certain characteristics—such as educators versus the general public, domestic users versus international users, or adults versus senior citizens.]

How Price Discrimination Works?

With price discrimination, the company looking to make the sales identifies different market segments, such as domestic and industrial users, with different price elasticities. Markets must be kept separate by time, physical distance, and nature of use.

For example, Microsoft Office Schools edition is available for a lower price to educational institutions than to other users. The markets cannot overlap so that consumers who purchase at a lower price in the elastic sub-market could resell at a higher price in the inelastic sub-market. The company must also have monopoly power to make price discrimination more effective.

TYPES OF PRICE DISCRIMINATION:

First degree price discrimination, occurs when a company charges the maximum possible price for each unit consumed. Because prices vary among units, the firm captures all available consumer surplus for itself. Many industries involving client services practice first-degree price discrimination, where a company charges a different price for every good or service sold.

Second degree price discrimination occurs when a company charges a different price for different quantities consumed, such as quantity discounts on bulk purchases.

Third degree price discrimination occurs when a company charges a different price to different consumer groups. For example, a theater may divide moviegoers into seniors, adults, and children, each paying a different price when seeing the same movie. This discrimination is the most common.

Examples of Price Discrimination

One example of price discrimination can be seen in the airline industry. Consumers buying airline tickets several months in advance typically pay less than consumers purchasing at the last minute. When demand for a particular flight is high, airlines raise ticket prices in response.

By contrast, when tickets for a flight are not selling well, the airline reduces the cost of available tickets to try to generate sales. Because many passengers prefer flying home late on Sunday, those flights tend to be more expensive than flights leaving early Sunday morning. Airline passengers typically pay more for additional legroom too.

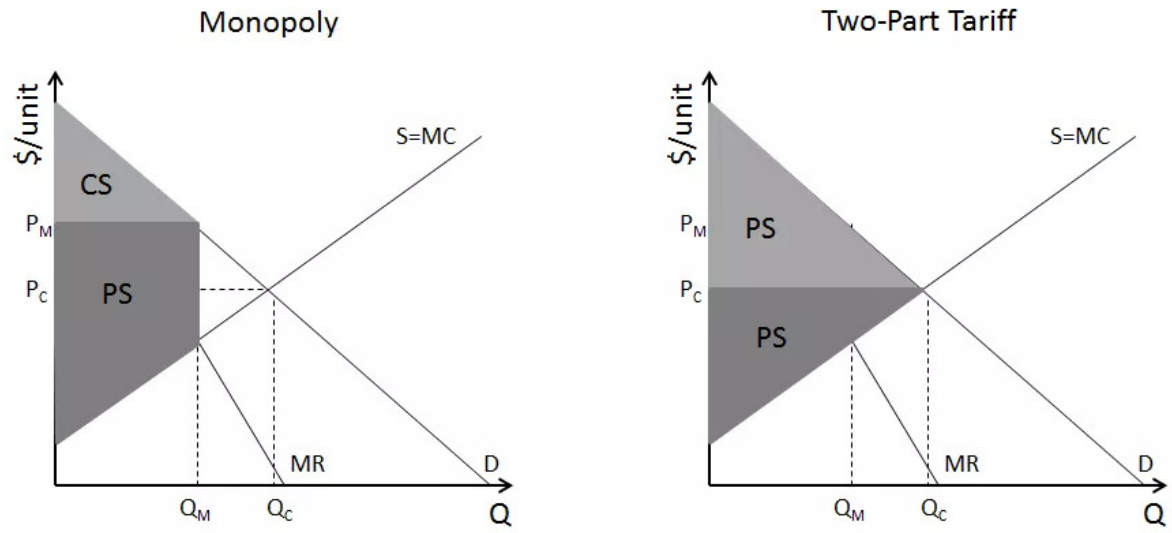
- With price discrimination, a seller charges customers a different fee for the same product or service.
- With first-degree discrimination, the company charges the maximum possible price for each unit consumed.

- Second-degree discrimination involves discounts for products or services bought in bulk, while third-degree discrimination reflects different prices for different consumer groups.

TWO PART TARIFF:

A two-part tariff is a price discrimination technique that consists in charging consumers with a lump sum fee for the right to purchase the product and then a price per unit consumed. This practice is specially used in places such as golf clubs and amusement parks.

The firm must set the enrolment fee and the price per-unit of the product that maximizes its profit. To maximize the amount of product purchased by consumers the firm must set a price that is equal to the marginal cost. Subsequently, the firm will appropriate consumer surplus by setting a fixed fee, A. The first tariff would be the entrance fee, A, which allows the monopoly to extract all consumer surplus. The second tariff is the price per unit, p*q, being this price equal to marginal cost, which means that there is no surplus, since the surplus cannot be extracted twice.



One thing to note about a two-part tariff is that, like some forms of price discrimination, it is economically efficient (despite fitting many people's definitions of unfair, of course). You may have noticed earlier that the quantity sold and per-unit price in the two-part tariff diagram were labeled as Qc and Pc, respectively- this is not random, it is instead meant to highlight that these values are the same as what would exist in a competitive market. As the above diagram shows, total surplus (i.e. the sum of consumer surplus and producer surplus) is the same in our basic two-part tariff model as it is under perfect competition, it is only the distribution of surplus that is different. This is possible because the two-part tariff gives the producer a way to recoup (via the fixed fee) the surplus that would be lost by lowering the per-unit price below the regular monopoly price.

Because total surplus is generally greater with a two-part tariff than with regular monopoly pricing, it is possible to design a two-part tariff such that both consumers and producers are better off than they would be under monopoly pricing. This concept is particularly relevant in situations where, for various reasons, it is prudent or necessary to offer consumers the choice of regular pricing or a two-part tariff.

NATURAL MONOPOLY:

A natural monopoly is a type of monopoly that exists due to the high start-up costs or powerful economies of scale of conducting a business in a specific industry. A company with a natural monopoly might be the only provider or a product or service in an industry or geographic location. Natural monopolies can arise in industries that require unique raw materials, technology, or similar factors to operate.

Why Natural Monopolies Are Allowed

Natural monopolies are allowed when a single company can supply a product or service at a lower cost than any potential competitor, and at a volume that can service an entire market. Since natural monopolies use an industry's limited resources efficiently to offer the lowest unit price to consumers, it is advantageous in many situations to have a natural monopoly.

For example, the utility industry is a natural monopoly. The utility monopolies provide water, sewer services, electricity, and energy such as natural gas and oil to cities and towns across the country.

Regulating Natural Monopolies

Companies that have a natural monopoly may sometimes exploit the benefits by restricting the supply of a good,inflating prices, or by exerting their power in damaging ways other than though prices.

For example, a utility company might attempt to increase electricity rates to accumulate excessive profits to owners or executives. Or an internet service platform might use its monopoly power over information, online interactions, and commerce to exercise undue influence over what people can see, say, or sell online.

IMPERFECT COMPETETION: MONOPSONY

A monopsony is a market condition in which there is only one buyer, the monopsonist. Like a monopoly, a monopsony also has imperfect market conditions. The difference between a monopoly and monopsony is primarily in the difference between the controlling entities. A single buyer dominates a monopolized market while an individual seller controls a monopolized market. Monosonists are common to areas where they supply most or all of the region's jobs.

Monopsony and Employee Wages

Monopsony can also be common in labor markets when a single employer has an advantage over the workforce. When this happens, the wholesalers, in this case, the potential employees, agree to

a lower wage because of factors resulting from the buying company's control. This wage control drives down the cost to the employer and increases profit margins.

The technology engineering market offers one example of wage suppression. With only a few large tech companies in the market requiring engineers, major players such as Cisco, Oracle and others have been accused of conspiring on wages to minimize labor costs so that the major tech companies can generate higher profits. This example illustrates a sort of oligopsony in which multiple companies are involved.

UNIT 2: GAME THEORY AND STRATEGIC BEHAVIOUR

What Is Game Theory?
Game theory is a theoretical framework for conceiving social situations among competing players. In some respects, game theory is the science of strategy, or at least the optimal decision-making of independent and competing actors in a strategic setting. The key pioneers of game theory were mathematicians John von Neumann and John Nash, as well as economist Oskar Morgenstern.

The Basics of Game Theory

The focus of game theory is the game, which serves as a model of an interactive situation among rational players. The key to game theory is that one player's payoff is contingent on the strategy implemented by the other player. The game identifies the players' identities, preferences, and available strategies and how these strategies affect the outcome. Depending on the model, various other requirements or assumptions may be necessary.

Game theory has a wide range of applications, including psychology, evolutionary biology, war, politics, economics, and business. Despite its many advances, game theory is still a young and developing science.

Game Theory Definitions

Any time we have a situation with two or more players that involve known payouts or quantifiable consequences, we can use game theory to help determine the most likely outcomes. Let's start out by defining a few terms commonly used in the study of game theory:

- **Game**: Any set of circumstances that has a result dependent on the actions of two or more decision-makers (players)

- **Players**: A strategic decision-maker within the context of the game
- **Strategy**: A complete plan of action a player will take given the set of circumstances that might arise within the game
- **Payoff**: The payout a player receives from arriving at a particular outcome (The payout can be in any quantifiable form, from dollars to utility.)

- **Information set**: The information available at a given point in the game (The term information set is most usually applied when the game has a sequential component.)
- **Equilibrium**: The point in a game where both players have made their decisions and an outcome is reached

The Nash Equilibrium

Nash Equilibrium is an outcome reached that, once achieved, means no player can increase payoff by changing decisions unilaterally. It can also be thought of as "no regrets," in the sense that once a decision is made, the player will have no regrets concerning decisions considering the consequences.

The Nash Equilibrium is reached over time, in most cases. However, once the Nash Equilibrium is reached, it will not be deviated from. After we learn how to find the Nash Equilibrium, take a look at how a unilateral move would affect the situation. Does it make any sense? It shouldn't, and that's why the Nash Equilibrium is described as "no regrets." Generally, there can be more than one equilibrium in a game.

However, this usually occurs in games with more complex elements than two choices by two players. In simultaneous games that are repeated over time, one of these multiple equilibrium is reached after some trial and error. This scenario of different choices overtime before reaching equilibrium is the most often played out in the business world when two firms are determining prices for highly interchangeable products, such as airfare or soft drinks.

The Prisoner's Dilemma

The Prisoner's Dilemma is the most well-known example of game theory. Consider the example of two criminals arrested for a crime. Prosecutors have no hard evidence to convict them. However, to gain a confession, officials remove the prisoners from their solitary cells and question each one in separate chambers. Neither prisoner has the means to communicate with each other. Officials present four deals, often displayed as a 2 x 2 box.

1. If both confess, they will each receive a five-year prison sentence.
2. If Prisoner 1 confesses, but Prisoner 2 does not, Prisoner 1 will get three years and Prisoner 2 will get nine years.
3. If Prisoner 2 confesses, but Prisoner 1 does not, Prisoner 1 will get 10 years, and Prisoner 2 will get two years.
4. If neither confesses, each will serve two years in prison.

The most favorable strategy is to not confess. However, neither is aware of the other's strategy and without certainty that one will not confess, both will likely confess and receive a five-year prison

sentence. The Nash equilibrium suggests that in a prisoner's dilemma, both players will make the move that is best for them individually but worse for them collectively.

The expression "tit for tat" has been determined to be the optimal strategy for optimizing a prisoner's dilemma. Tit for tat was introduced by Anatol Rapoport, who developed a strategy in which each participant in an iterated prisoner's dilemma follows a course of action consistent

with his opponent's previous turn. For example, if provoked, a player subsequently responds with retaliation; if unprovoked, the player cooperates.

Limitations of Game Theory

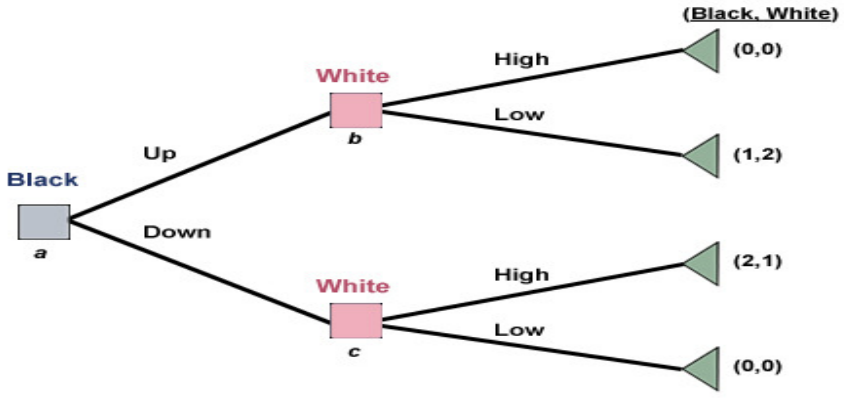
The biggest issue with game theory is that, like most other economic models, it relies on the assumption that people are rational actors that are self-interested and utility-maximizing. Of course, we are social beings who do cooperate and do care about the welfare of others, often at our own expense. Game theory cannot account for the fact that in some situations we may fall into a Nash equilibrium, and other times not, depending on the social context and who the players are.

What Are Sequential Games?

Sequential games are those in which players make moves at different times or in turn. This means that players who move later in the game have additional information about the actions of other players or states of the world. This also means that players who move first can often influence the game. Each player's strategy makes the actions that he or she chooses conditional on the additional information received during the game.

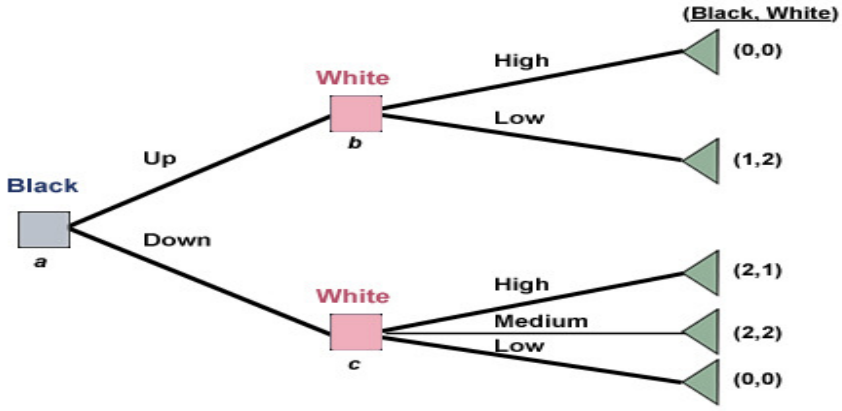
Understanding sequential games is very important in business. It is common for business planners to apply rule of thumb approaches and static analysis to situations. However, this approach ignores the fact that strategic situations are often vastly different from one another and very dynamic. Modelling business situations as sequential games forces a planner to consider these aspects and allows for better forecasting and planning, both of which lead directly to better decision-making.

A common way of representing games, especially sequential games, is the extensive form representation, which uses game trees. Game trees are made up of nodes and branches, which are used to represent the sequence of moves and the available actions, respectively. Consider two players, Mr Black and Ms White, who are playing a sequential game. Mr Black moves first and has the option of Up or Down. Ms White then observes his action. Regardless of what Mr Black chooses, she then has the option of High or Low. The game tree for this game would appear as follows:



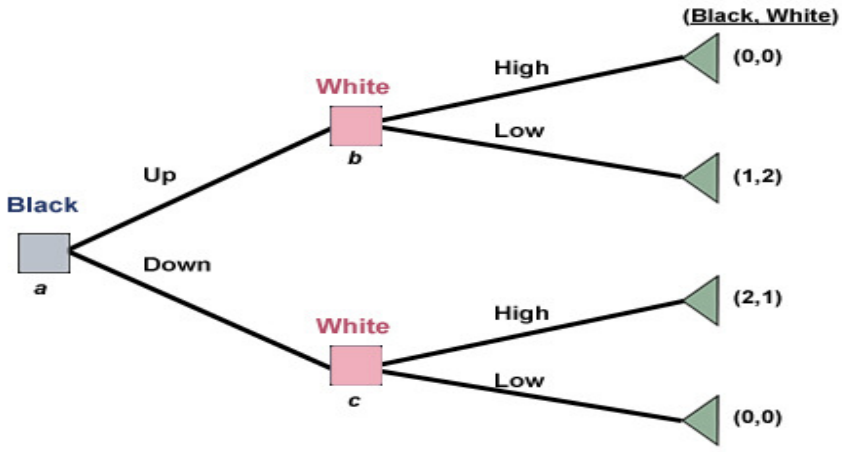
In this subject, decisions are represented by square nodes. Node a is the decision node where Mr Black chooses between Up and Down. Since node a is the first node, it is also known as the initial node. Nodes b and c are the decision nodes at which Ms White chooses between High and Low. The triangle-shaped ending nodes on the right are the terminal nodes, which also have the payoffs for each player associated with each outcome listed beside them.

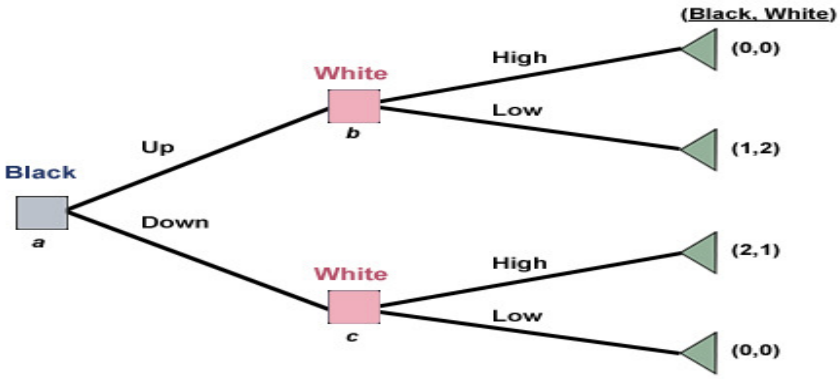
Sometimes, one player's action at a given stage can change the options available at subsequent stages. Suppose that you adjust the above game so that if Mr Black plays Down, Ms White can play High, Medium and Low. In this situation, the game tree would look as



Strategies in Sequential Games

In sequential games, it is important to clearly define what is meant by strategy. Game theorists define a strategy as a complete contingent plan of actions. In other words, a strategy specifies what action a player will take at each decision node. Consider once again the game between Mr Black and Ms White.





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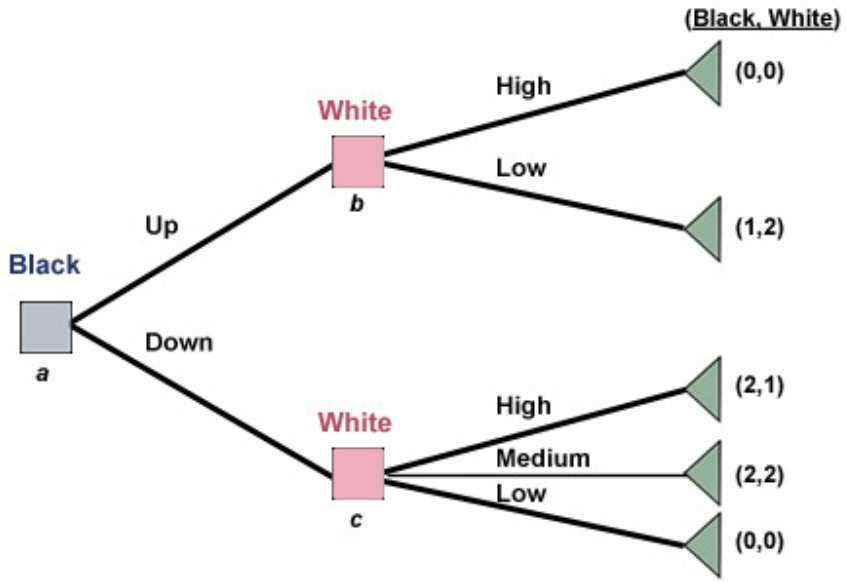

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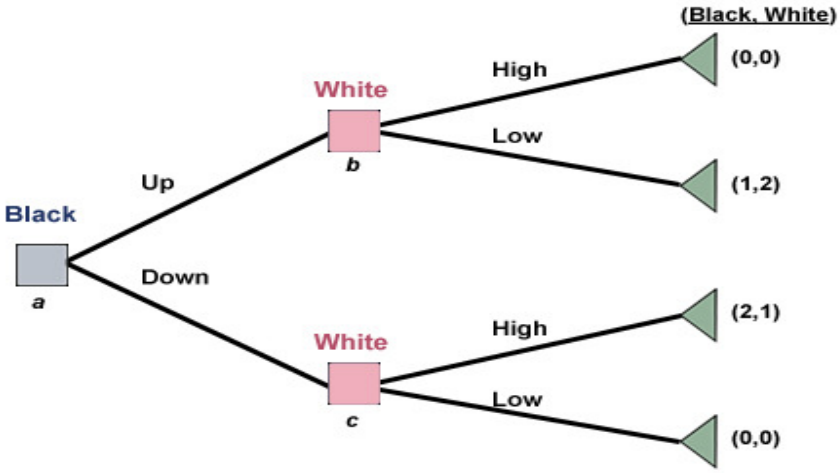
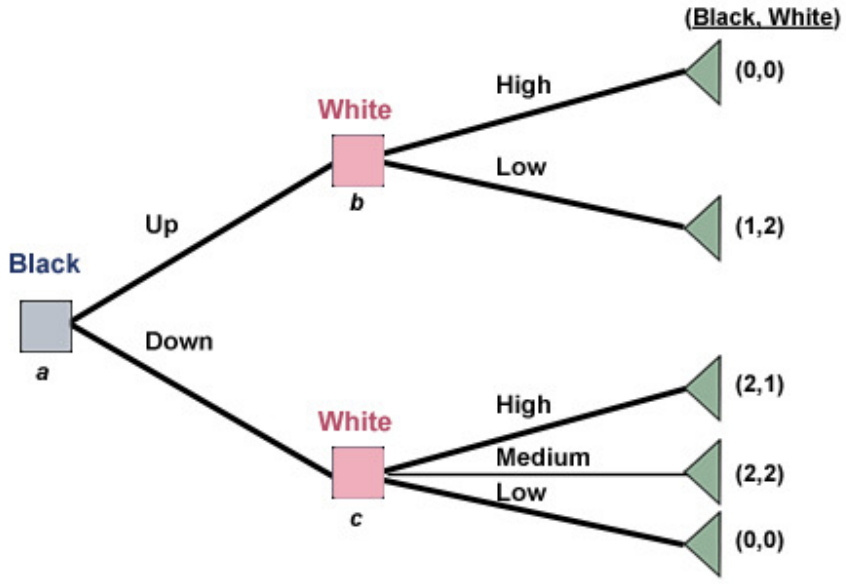
Black and Ms White.



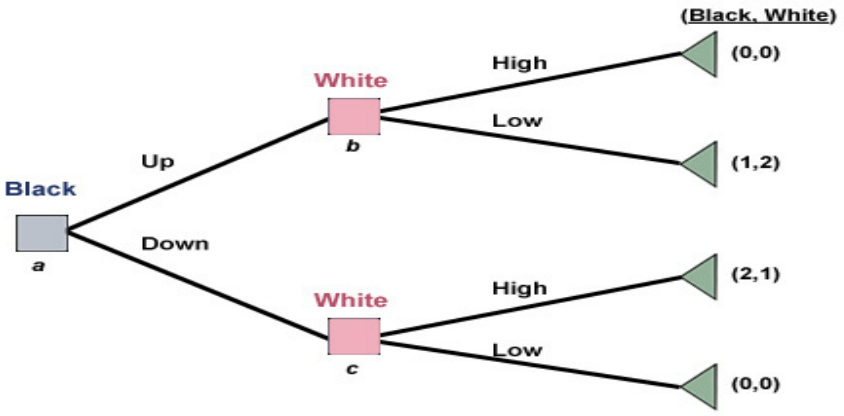
In this subject, decisions are represented by square nodes. Node a is the decision node where Mr Black chooses between Up and Down. Since node a is the first node, it is also known as the initial node. Nodes b and c are the decision nodes at which Ms White chooses between High and Low. The triangle-shaped ending nodes on the right are the terminal nodes, which also have the payoffs for each player associated with each outcome listed beside them.

Sometimes, one player's action at a given stage can change the options available at subsequent stages. Suppose that you adjust the above game so that if Mr Black plays Down, Ms White can play High, Medium and Low. In this situation, the game tree would look as



Strategies in Sequential Games

In sequential games, it is important to clearly define what is meant by strategy. Game theorists define a strategy as a complete contingent plan of actions. In other words, a strategy specifies what action a player will take at each decision node. Consider once again the game between Mr Black and Ms White.



Mr Black has two strategies available — Up and Down. Ms White, however, actually has four strategies available since there are two nodes to consider — b and c — and two possible actions at each node — High and Low. The following table shows the strategies available to Ms White:

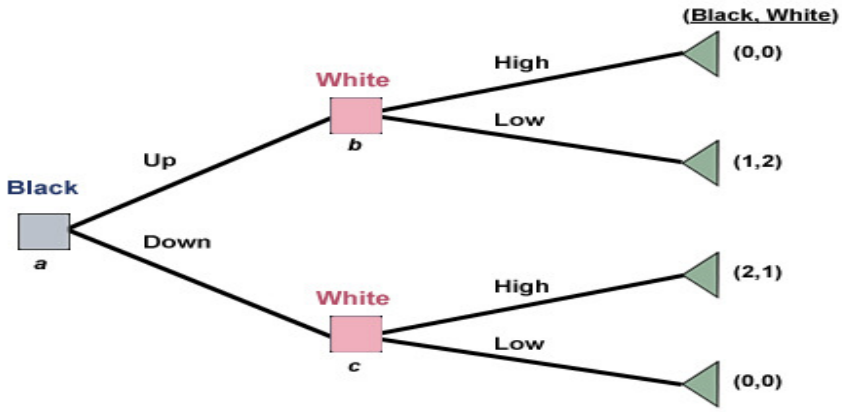
	If Mr Black Plays Up, Play:	**If Mr Black Plays Down, Play:**
Ms White's Strategy 1	High	High
Ms White's Strategy 2	High	Low
Ms White's Strategy 3	Low	High
Ms White's Strategy 4	Low	Low

Because actions always lead to reactions, an important aspect of strategy in sequential games is that players must consider — and plan for — their opponent's reactions. In the example above, if Mr Black wants to maximise his payoff, he must consider how Ms White will react if he moves Up and how she will react if he moves Down.

The following animation illustrates how game trees can be used to map out sequential games. As you watch, take special note of how the decisions of one player affect the strategy choices available to the other.

Nash Equilibrium versus Subgame Perfect Equilibrium

It is important to note that all subgame perfect equilibria are Nash equilibria. Since backward induction ensures that each player will play his or her best action at each node, the resulting strategies will correspond to a Nash equilibrium. To see this, again consider the game between Mr Black and Ms White.



Notice that there is only one subgame perfect equilibrium. Ms White plays Low if Mr Black plays Up, and plays High if Mr Black plays Down. Therefore, Mr Black will play down.

However, suppose that Ms White has adopted a strategy that states that she should always play Low and Mr Black has chosen to play Up. Can a Nash equilibrium be reached in this case?
A Nash equilibrium implies that no player can do better by switching strategy given the strategies of the other players. If Ms White switches her action to High at node b but still chose Low at node c, then she would be worse off given that Mr Black is playing Up. If she switches her action to high at node c, continuing to choose Low at b, then she would be no better off given that Mr Black already is playing Up. Similarly, with Ms White committed to always playing Low, if Mr Black chose to switch his strategy to play Down, he would be worse off. Thus, no player can unilaterally be better off by switching his or her strategy.

We have shown that this result is a Nash equilibrium, but it is not a subgame perfect equilibrium. This is because it violates the rules of backward induction, which hold that Ms White would never choose Low at node c. In summary, all subgame perfect equilibria are Nash equilibrium, but not all Nash equilibrium are subgame perfect equilibria.You can also determine whether Ms White always playing Low and Mr Black playing Up is a Nash equilibrium by using the following.

LONG RUN DECISIONS IN STATIC FRAMEWORK

No **perfectly competitive firm** acting alone can affect the market price. However, the combination of many firms entering or exiting the market will affect overall supply in the market. In turn, a shift in supply for the market as a whole will affect the market price. Entry and exit to and from the market are the driving forces behind a process that, in the long run, pushes the price down to minimum average total costs so that all firms are earning a zero profit.

To understand how short-run profits for a perfectly competitive firm will evaporate in the long run, imagine the following situation. The market is in **long-run equilibrium**, where all firms earn zero economic profits producing the output level where P = MR = MC and P = AC. No firm has the incentive to enter or leave the market. Let's say that the product's demand increases, and with that, the market price goes up. The existing firms in the industry are now facing a higher price than before, so they will increase production to the new output level where P = MR = MC.

This will temporarily make the market price rise above the average cost curve, and therefore, the existing firms in the market will now be earning economic profits. However, these economic profits attract other firms to enter the market. Entry of many new firms causes the market supply curve to shift to the right. As the supply curve shifts to the right, the market price starts decreasing, and with that, economic profits fall for new and existing firms. As long as there are still profits in the market, entry will continue to shift supply to the right. This will stop whenever the market price is driven down to the zero-profit level, where no firm is earning economic profits.

Short-run losses will fade away by reversing this process. Say that the market is in long-run equilibrium. This time, instead, demand decreases, and with that, the market price starts falling. The existing firms in the industry are now facing a lower price than before, and as it will be below the average cost curve, they will now be making economic losses. Some firms will continue producing where the new P = MR = MC, as long as they are able to cover their average variable costs. Some firms will have to shut down immediately as they will not be able to cover their average variable costs, and will then only incur their fixed costs, minimizing their losses. Exit of many firms causes the market supply curve to shift to the left. As the supply curve shifts to the left, the market price starts rising, and economic losses start to be lower. This process ends whenever the market price rises to the zero-profit level, where the existing firms are no longer losing money and are at zero profits again. Thus, while a perfectly competitive firm can earn profits in the short run, in the long run the process of entry will push down prices until they reach the zero-profit level. Conversely, while a perfectly competitive firm may earn losses in the short run, firms will not continually lose money. In the long run, firms making losses are able to escape from their fixed costs, and their exit from the market will push the price back up to the zero-profit level. In the long run, this process of entry and exit will drive the price in perfectly competitive markets to the zero-profit point at the bottom of the AC curve, where marginal cost crosses average cost.

OLIGOPOLY

Oligopoly is a market structure with a small number of firms, none of which can keep the others from having significant influence. The concentration ratio measures the market share of the largest firms. A monopoly is one firm, duopoly is two firms and oligopoly is two or more firms. There is no precise upper limit to the number of firms in an oligopoly, but the number must be low enough that the actions of one firm significantly influence the others.

Cournot's Duopoly Model

The earliest duopoly model was developed in 1838 by the French economist Augustin Cournot. The model may be presented in many ways.

The original version is quite limited in that it makes the assumption that the duopolists have identical products and identical costs.

Actually Cournot illustrated his model with the example of two firms each owning a spring of mineral water, which is produced at zero costs. We will present briefly this version, and then we will generalize its presentation by using the reaction curves approach.

Cournot assumed that there are two firms each owning a mineral well, and operating with zero costs. They sell their output in a market with a straight-line demand curve. Each firm acts on the assumption that its competitor will not change its output, and decides its own output so as to maximize profit.

Assume that firm A is the first to start producing and selling mineral water. It will produce quantity A, at price P where profits are at a maximum (figure 9.1), because at this point MC — MR = 0. The elasticity of market demand at this level of output is equal to unity and the total revenue of the firm is a maximum. With zero costs, maximum R implies maximum profits, Π. Now firm B assumes that A will keep its output fixed (at 0/1), and hence considers that its own demand curve is CD'.

Clearly firm B will produce half the quantity AD', because (under the Cournot assumption of fixed output of the rival) at this level (AB) of output (and at price F) its revenue and profit is at a maximum. B produces half of the market which has not been supplied by A, that is, B's output is ¼ (= ½. ½) of the total market.

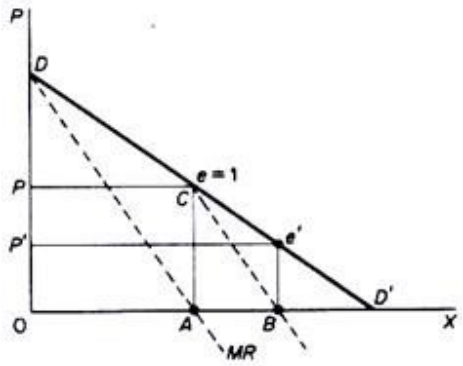


Figure 9.1

Firm A, faced with this situation, assumes that B will retain his quantity constant in the next period. So he will produce one-half of the market which is not supplied by B. Since B covers one-quarter of the market, A will, in the next period, produce ½(1 – ¼) = ½. ¾ = ⅜ of the total market.

Firm B reacts on the Cournot assumption, and will produce one-half of the unsupplied section of the market, i.e. ½ (1 – ⅜) = 5/16.

This action-reaction pattern continues, since firms have the naive behaviour of never learning from past patterns of reaction of their rival. However, eventually an equilibrium will be reached

in which each firm produces one-third of the total market. Together they cover two-thirds of the total market. Each firm maximises its profit in each period, but the industry profits are not maximised.

The Cournot solution is stable. Each firm supplies 4 of the market, at a common price which is lower than the monopoly price, but above the pure competitive price (which is zero in the Cournot example of costless production).

The reaction-curves approach is a more powerful method of analysis of oligopolistic markets, because it allows the relaxation of the assumption of identical costs and identical demands. This approach is based on Stackelberg's indifference-curve analysis, which introduces the concept of isoprofit curves of competitors. We will first establish the shape of the isoprofit curves for substitute commodities, and from these curves we will subsequently derive the reaction curves of the Cournot duopolists.

An isoprofit curve for firm A is the locus of points defined by different levels of output of A and his rival B, which yield to A the same level of profit (figure 9.2).

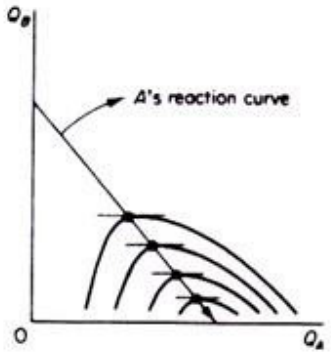


Figure 9.2 Isoprofit map of firm *A*

Similarly, an isoprofit curve for firm B is the locus of points of different levels of output of the two competitors which yield to B the same level of profit (figure 9. 3)

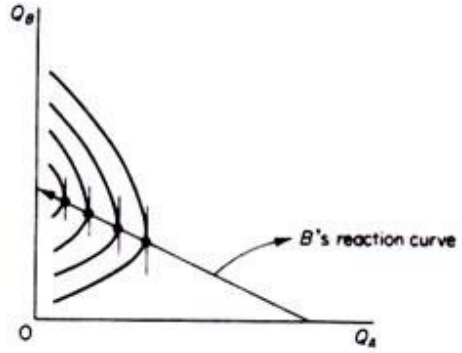


Figure 9.3 Isoprofit map of firm *B*

Cournot's equilibrium is determined by the intersection of the two reaction curves. It is a stable equilibrium, provided that A's reaction curve is steeper than B's reaction curve. (This condition is satisfied by the assumption we made that the highest points of successive isoprofit curves of A lie to the left of one another, while the highest points of B's isoprofit curves lie to the right of each other.)

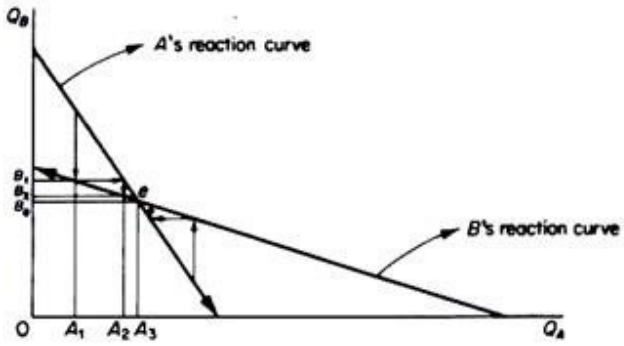


Figure 9.8

Bertrand's Duopoly Model

Bertrand developed his duopoly model in 1883. His model differs from Cournot's in that he assumes that each firm expects that the rival will keep its price constant, irrespective of its own decision about pricing.

Thus each firm is faced by the same market demand, and aims at the maximization of its own profit on the assumption that the price of the competitor will remain constant.

In Bertrand's model the reaction curves are derived from isoprofit maps which are convex to the axes, on which we now measure the prices of the duopolists. Each isoprofit curve for firm A shows the same level of profit which would accrue to A from various levels of prices charged by this firm and its rival.

The isoprofit curve for A is convex to its price axis (P_A). This shape shows the fact that firm A must lower its price up to a certain level (point e in figure 9.11) to meet the cutting of price of its competitor, in order to maintain the level of its profits at Π_{A2}. However, after that price level has been reached and if B continues to cut its price, firm A will be unable to retain its profits, even if it keeps its own price unchanged (at P_{Ae}). If, for example, firm B cuts its price at P_B, firm A will

find itself at a lower isoprofit curve (Π_{A1}) which shows lower profits. The reduction of profits of A is due to the fall in price, and the increase in output beyond the optimal level of utilization of the plant with the consequent increase in costs. Clearly the lower the isoprofit curve, the lower the level of profits.

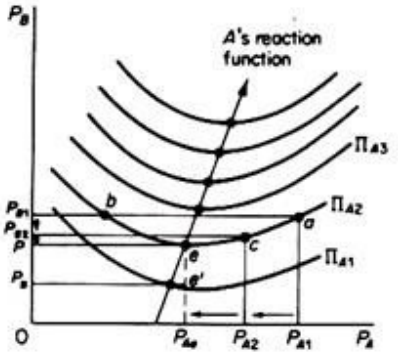


Figure 9.11

To summaries for any price charged by firm B there will be a unique price of firm A which maximizes the latter's profit. This unique profit-maximizing price is determined at the lowest point on the highest attainable isoprofit curve of A. The minimum points of the isoprofit curves lie to the right of each other, reflecting the fact that as firm A moves to a higher level of profit, it gains some of the customers of B when the latter increases its price, even if A also raises its price.

Product Differentiation

Product differentiation is a marketing strategy that strives to distinguish a company's products or services from the competition. Successful product differentiation involves identifying and communicating the unique qualities of a company's offerings while highlighting the distinct differences between those offerings and others on the market. Product differentiation goes hand-in-hand with developing a strong value proposition to make a product or service attractive to a target market or audience.

If successful, product differentiation can create a competitive advantage for the product's seller and ultimately build brand awareness. Examples of differentiated products might include the fastest high-speed internet service or the most gas-efficient electric vehicle on the market today.

How Product Differentiation Works

Product differentiation is intended to prod the consumer into choosing one brand over another in a crowded field of competitors. It identifies the qualities that set one product apart from other similar products and uses those differences to drive consumer choice. Differentiation marketing can also involve focusing on a niche market. For example, a small company might find it challenging to compete with a much larger competitor in the same industry. As a result, the smaller company might highlight exceptional service or a money-back guarantee.

Types of Product Differentiation

Ideally, a product differentiation strategy should demonstrate that the product can do everything the competing choices can but has an additional benefit that no one else offers. Below are a few of the most common strategies employed to differentiate a product or service.

Price

Price can work both ways, meaning companies can charge the lowest price to attract buyers that are cost-conscious–Costco, for example. However, companies can also charge higher prices to emphasize that it's a luxury product and worth it–such as a luxury car.

Performance and Reliability

Products that are considered reliable and offer long-term value are often touted as better than the competition. Also, increased performance is often used as a differentiating factor for products such as batteries.

Location and Service

For smaller, local companies that are trying to stand out from national brands, it's common to emphasize that they're a local business. Also, the added level of service that results from being in "your neighborhood" is a way for companies to showcase their high-quality service or product but also justify a higher price versus national brands.

Benefits of Product Differentiation

A differentiated product can increase brand loyalty and even survive a higher price point. If a product is perceived to be better than its competitors, consumers will consider it worth the higher price.

Differentiation marketing can help companies stand out when a product isn't perceived to be much different from a competitor's, such as bottled water. The strategy might be to focus on a lower price point or that it's a locally-owned business. When functional aspects of the two products are identical, non-functional features can be highlighted. The strategy can be merely an appealing change in design or styling.

Example:

Companies introducing a new product often cite its lower costs to buy or use. If Company X produces a coffee maker virtually identical to that of Company Y, Company X may offer a version at a lower cost. If it comes with a reusable filter, the savings on paper filters are highlighted in packaging and advertising it.

UNIT 3: MARKET FAILURE

Asymmetric Information: Adverse Selection and Moral Hazard

Asymmetric information, different information between two parties, leads to the following – adverse selection, moral hazards, and market failure.

Asymmetric Information

Asymmetric information means that one party has more or better information than the other when making decisions and transactions. The imperfect information causes an imbalance of power. For example, when you are trying to negotiate your salary, you will not know the

maximum your employer is willing to pay and your employer will not know the minimum you will be willing to accept.Accurate information is essential for sound economic decisions. When a market experiences an imbalance it can lead to market failure.

Adverse Selection

Adverse selection is a term used in economics that refers to a process in which undesired results occur when buyers and sellers have access to different/imperfect information. The uneven knowledge causes the price and quantity of goods or services in a market to shift. This results in "bad" products or services being selected. For example, if a bank set one price for all of its checking account customers it runs the risk of being adversely affected by its low-balance and high activity customers. The individual price would generate a low profit for the bank.

Moral Hazards and Market Failure

In addition to adverse selection, moral hazards are also a result of asymmetric information. A moral hazard is a situation where a party will take risks because the cost that could incur will not be felt by the party taking the risk. A moral hazard can occur when the actions of one party may change to the detriment of another after a financial transaction. In relation to asymmetric information, moral hazard may occur if one party is insulated from risk and has more information about its actions and intentions than the party paying for the negative consequences of the risk. For example, moral hazards occur in employment relationships involving employees and management. When a firm cannot observe all of the actions of employees and managers there is the chance that careless and selfish decision making will occur.

Principal-Agent Problem

In economics, the principal-agent problem (also known as an agency dilemma) exists when conflicts of interest arise between a principal and an agent in a business setting. Conflicts usually exist when contracts are written due to uncertainty and risk taken on by both parties. The principal hires the agent to perform specific to duties that represent its best interest. The work that is performed can be costly to the agent and not in the principal's best interest. In short, the work done by the agent doesn't actually reflect the best interests of the principal.

Public Good:
A public good is a product that an individual can consume without reducing its availability to others and of which no one is deprived. Examples of public goods include law enforcement, national defense, sewer systems, public parks, and the air we breathe. As those examples reveal, public goods are almost always publicly financed.A public good must generally be both "non-rivalrous" and "non-excludable." Non-rivalrous means that the goods don't dwindle in supply as people consume them. Non-excludability means that the good is available to all and cannot be withheld, even from people who do not contribute to its public funding.

Public Goods vs. Private Goods:
The opposite of a public good is a private good, which is both excludable and rivalrous. It can only be used by one person at a time, and that person can prevent its use by others, such as in the

case of a wedding ring. It may also be destroyed in the using, such as when a slice of pizza is eaten, which makes its use by others impossible. It generally costs money, which pays for its private use. Some people argue that the privatization of public goods would eliminate the free-rider problem as well as cut costs and increase efficiency.

A public good has two key **characteristics**:
it is nonexcludable and nonrivalrous. These characteristics make it difficult for market producers to sell the good to individual consumers.

- **Nonexcludable** means that it is costly or impossible for one user to exclude others from using a good. nonexcludable, means that it is costly or impossible to exclude someone from using the good. If Larry buys a private good like a piece of pizza, then he can exclude others, like Lorna, from eating that pizza. However, if national defense is being provided, then it includes everyone. Even if you strongly disagree with America's defense policies or with the level of defense spending, the national defense still protects you. You cannot choose to be unprotected, and national defense cannot protect everyone else and exclude you.

- **Nonrivalrous** means that when one person uses a good, it does not prevent others from using it. nonrivalrous—means that when one person uses the public good, another can also use it. With a private good like pizza, if Max is eating the pizza, then Michelle cannot also eat it it—the two people are rivals in consumption. With a public good like national defense, Max's consumption of national defense does not reduce the amount left for Michelle, so they are nonrivalrous in this area.

VIKREY-CLARKE-GROVE MECHANISM

VCG mechanisms constitute an extensively studied special class of mechanisms with money. They are derived using the idea of violating one of the necessary conditions of the Gibbard-Satterthwaite theorem. VCG mechanisms assume a restricted environment called the quasilinear environment in which no social choice function can be dictatorial and moreover the mechanism can be elegantly decomposed into an allocation rule and a payment rule. Further the ex-post efficiency property can be separated into two properties, allocative efficiency (a property of the allocation rule) and strict budget balance (a property of the payment rule). VCG mechanisms are appealing because they satisfy allocative efficiency as well as dominant strategy incentive compatibility. We discuss the quasilinear environment first followed by Groves mechanisms (which are the most general among VCG mechanisms). Then we discuss the Clarke mechanism (also called pivotal mechanism) of which the Vickrey mechanism is a special case. We provide several examples to illustrate VCG mechanisms.
Vickrey–Clarke–Groves auction is an application of VCG mechanism for welfare maximization. Here, is the set of all possible allocations of items to the agents. Each agent assigns a personal monetary value to each bundle of items, and the goal is to maximize the sum of the values of all agents.

A well-known special case is the Vickrey Auction. Here, there is only a single item, and the set contains possible outcomes: either sell the item to one of the agents, or not sell it at all. In step 3, the winner agent is paid 0 (since the total value of the others is 0) and the losers receive a payment equal to the declared value of the winner. In step 4, the winner pays the second-highest bid (the total value of the others had he not participated) and the losers pay the declared value of the winner (the total value of the others had they not participated). All in all, the winner pays the second-highest bid and the losers pay 0.

A VCG mechanism can also be used in a double auction. It is the most general form of incentive-compatible double-auction since it can handle a combinatorial auction with arbitrary value functions on bundles. Unfortunately, it is not budget-balanced: the total value paid by the buyers is smaller than the total value received by the sellers. Hence, in order to make it work, the auctioneer has to subsidize the trade.

UNIT 4: GENERAL EQUILIBRIUM AND WELFARE

EDGEWORTH BOX

The EdgeworthFrancis Edgeworth (1845–1926) introduced a variety of mathematical tools, including calculus, for considering economics and political issues, and was certainly among the first to use advanced mathematics for studying ethical problems. box considers a two-person, two-good "exchange economy." That is, two people have utility functions of two goods and endowments (initial allocations) of the two goods. The Edgeworth box is a graphical representation of the exchange problem facing these people and also permits a straightforward solution to their exchange problem.

The Edgeworth box is represented in Figure 14.1 "The Edgeworth box". Person 1 is "located" in the lower left (southwest) corner, and Person 2 in the upper right (northeast) corner. The X good is given on the horizontal axis, the Y good on the vertical. The distance between them is the total amount of the good that they have between them. A point in the box gives the allocation of the good—the distance to the lower left to Person 1, the remainder to Person 2. Thus, for the point illustrated, Person 1 obtains (x_1, y_1), and Person 2 obtains (x_2, y_2). The total amount of each good available to the two people will be fixed.

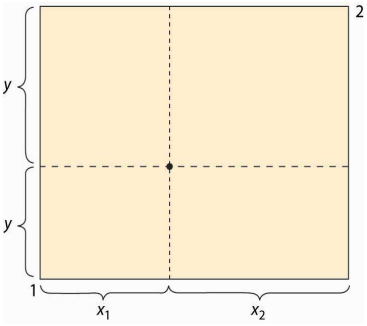


Fig 14.1: the edgeworth box

The allocation is efficient if there is no waste or slack in the system, even if it is wildly unfair. To distinguish this economic notion, it is sometimes called Pareto efficiency.

We can find the Pareto-efficient points by fixing Person 1's utility and then asking what point, on the indifference isoquant of Person 1, maximizes Person 2's utility. At that point, any increase in Person 2's utility must come at the expense of Person 1, and vice versa; that is, the point is Pareto efficient. An example is illustrated in Figure 14.2 "An efficient point".

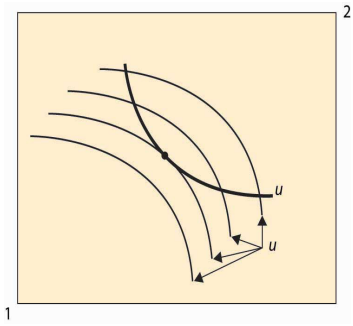


Fig 14.2: An efficient point

In Figure 14.2 "An efficient point", the isoquant of Person 1 is drawn with a dark, thick line. This utility level is fixed. It acts like the “budget constraint” for Person 2.

This process of identifying the points that are Pareto efficient can be carried out for every possible utility level for Person 1. What results is the set of Pareto-efficient points, and this set is also known as the contract curve.

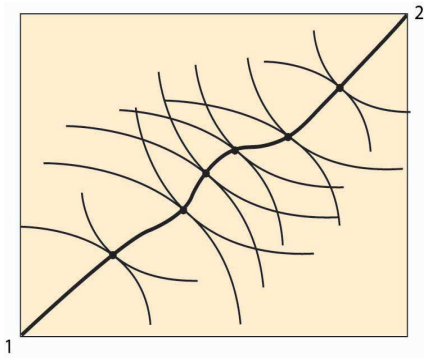


Fig 14.3: The contract curve

The contract curve need not have a simple shape, as Figure 14.3 "The contract curve" illustrates. The main properties are that it is increasing and ranges from Person 1 consuming zero of both goods to Person 2 consuming zero of both goods.

- The Edgeworth box considers a two-person, two-good “exchange economy.” The Edgeworth box is a graphical representation of the exchange problem facing these people and also permits a straightforward solution to their exchange problem. A point in the Edgeworth box is the consumption of one individual, with the balance of the endowment going to the other.
- Pareto efficiency is an allocation in which making one person better off requires making someone else worse off—there are no gains from trade or reallocation.

- In the Edgeworth box, the Pareto-efficient points arise as tangents between isoquants of the individuals. The set of such points is called the contract curve. The contract curve is always increasing.

THEORUMS OF WELFARE ECONOMICS:

There are two **fundamental theorems of welfare economics.** The first states that, under certain idealized conditions, any competitive equilibrium or Walrasian equilibrium leads to a Pareto efficient allocation of resources. The second states the converse, that any efficient allocation can be sustainable by a competitive equilibrium. Because of welfare economics' close ties to social choice theory, Arrow's impossibility theorem is sometimes listed as a third fundamental theorem.

The first theorem of welfare economics is based on the two assumptions:
1. In the economy, all commodities are competitive. The equilibrium in the economy is Pareto efficient.

2. There is market for all commodities. Each commodity is produced in the economy and consumption of commodity ads to utility function.

In an economy, all markets are competitive. Consumers and producers believe that their decisions have no effect on prices. In order to reduce the complexities, we have assumed simple economy with two markets and two input markets. Each market has two demanders and one supplier. In both market prices of commodities is regarded as the parameter.

Therefore no reallocation of goods or inputs can achieve a Pareto improvement. Suppose we put it differently then all gains from mutually advantageous trade is the equilibrium and the equilibrium prices have been exhausted.

Second theorem of welfare economics:

The second theorem of welfare economics has certain advantages over first theorem of welfare economics. It explains that if all consumers have convex preferences and all firms have convex production possibility sets then Pareto efficient allocation can be achieved. The equilibrium of a complete set of competitive markets are suitable for redistribution of initial endowments.

In the second welfare theorem, Pareto efficient allocation is A*. In such A* allocation, individual h has consumption x^h*. Firm j produces the output y^j*. We know that at A* is a point where all consumers will have the same marginal rates of substitution between all pairs of commodities. Let's assume that p_i denote the consumers' marginal rate of substitution between commodity i and commodity 1.

Externalities and Social Welfare!
We know that perfect competition leads to a Pareto-optimal general equilibrium.

We also assumed together with usual assumptions of perfect competition that there were no externalities of production and consumption. We first explain the nature of externalities and then

show how they prevent the attainment of a Pareto-optimal position by leading to divergences between private and social costs and benefit.

We assume that the firms contribute to the development of the local communities' recreational facilities, such as parks and schools, in order to improve the overall living conditions and output of their work force. If these facilities are available to the general public there will be divergence between the private marginal benefits (PMB) and the social marginal benefits (SMB). This difference is called a favorable externality of production. This difference is called a favorable externality of production. Now consider an unfavorable externality of production that may result from the expansion of an industry, namely, smoke nuisance. Suppose that, as the industry grows, the air becomes increasingly polluted with smoke from the factory chimneys.People in the community not only suffer discomfort because of the smoke, but also pay higher cleaning and laundry bills. In terms of social welfare, we must take into account these additional costs, in which case MSC > MPC.

The term 'market failure' refers to the failure of perfectly competitive markets to attain a Pareto optimality because of externalities. The market failure occurs because the market does not automatically charge prices to the external effects of using the resources.

A good example is air pollution. People may have to pay higher costs because of pollution which the market does not take into account. Thus, there is a divergence between private costs and social costs.

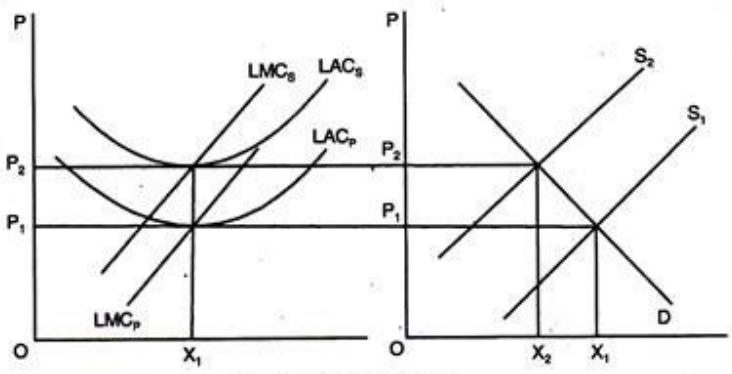


Fig. 15.7 : External Costs

Fig. 15.7 shows a competitive firm and industry. If only private costs are taken into account, the industry will be in long-run equilibrium when the P = (minimum point) LAC at output X_1 and price P_1. Now, suppose all the external costs were somehow included in the firm's cost curves. If this is done, LAC_P (private costs) would rise to LAC_S (social costs, private and external).

Now minimum $LAC_S > P_1$ which means some firms will leave the industry and the industry supply curve shift to the left. When the supply curve shifts to S_2 and the price to P_2 – minimum point on

LAC_S and the industry once again is in equilibrium. Thus, if the external costs are included, then the price would be higher and less goods would be produced and sold and less pollution would be generated.

We will demonstrate external benefits in Fig. 15.8. Positive classic example of positive externality is that even when people do not receive inoculations against polio, small pox, etc. benefits from everyone else being inoculated, for epidemics will not break out. Thus, there are benefits that are external to each individual's decision to be inoculated.

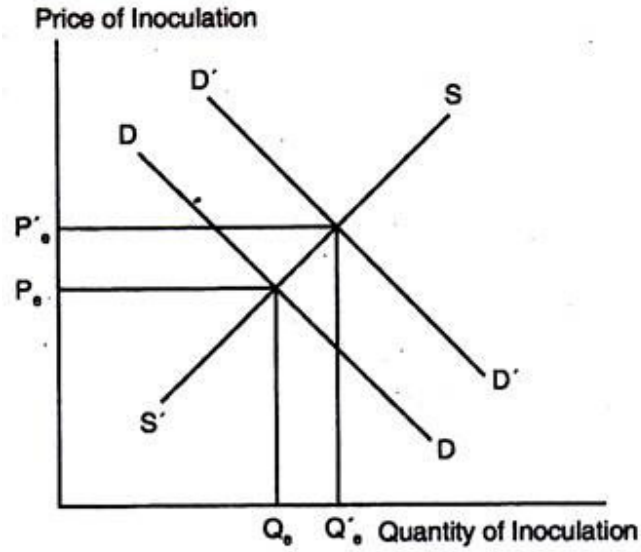


Fig. 15.8 : External Benefits

n Fig. 15.8, we show the demand curve, without external benefits as DD and the supply curve as SS. The equilibrium quantity is Q_e and the price, P. We assume that inoculation against contagious diseases generate external benefits to those individuals who may not be inoculated but who benefit because epidemics will not break out.

We have seen that when there are external costs, the market will tend to over allocate resources to the production of the good in question. On the other hand, when there are external benefits, the market forces will under-allocate resources for the production of that good.

Public good externalities stem from the peculiar nature of a public good. A public good is a good such that any individual's consumption of the good does not reduce the amount of the good available to any other consumer. For example, national defence system that protects me also protects any other members of the society.

INTERMEDIATE MACRO ECONOMICS-I (203)

Macro Economics (203)

Income and spending

AGGREGATE DEMAND AND EQUILIBRIUM OUTPUT Aggregate demand is the total amount of goods demanded in the economy. Distinguishing among goods demanded for consumption (C), for investment (I), by the government (G), and as net exports (NX), aggregate demand (AD) is determined by AD = C + I + NX

Output is at its equilibrium level when the quantity of output produced is equal to the quantity demanded. • Thus, an economy is at equilibrium output when Y = AD + C + I + G + NX

When aggregate demand—the amount people want to buy—is not equal to output, there is unplanned inventory investment or disinvestment. We summarize this as: IU = Y+AD

where IU is unplanned additions to inventory. If output is greater than aggregate demand, there is unplanned inventory investment, IU>0. • As excess inventory accumulates, firms cut back on production until output and aggregate demand are again in equilibrium. • Conversely, if output is below aggregate demand, inventories are drawn down until equilibrium is restored.

Consumption •When we eat food, wear clothing, or go to a movie, we are consuming some of the output of the economy. •All forms of consumption together make up about two-thirds of GDP. •Because consumption is so large, macroeconomists have devoted much energy to studying how households make their consumption decisions.

Income • Households receive income from their labor and their ownership of capital, pay taxes to the government, and then decide how much of their after-tax income to consume and how much to save. • We define income after the payment of all taxes, Y − T, to be disposable income. Households divide their disposable income between consumption and saving.

Consumption Function • We assume that the level of consumption depends directly on the level of disposable income. A higher level of disposable income leads to greater consumption. Thus, C = C(Y − T) • This equation states that consumption is a function of disposable income. The relationship between consumption and disposable income is called the consumption function

Marginal Propensity to consume The marginal propensity to consume (MPC) is the amount by which consumption changes when disposable income increases by one dollar. The MPC is between zero and one: an extra dollar of income increases consumption, but by less than one dollar. Thus, if households obtain an extra dollar of income, they save a portion of it. For example, if the MPC is 0.7, then households spend 70 cents of each additional dollar of disposable income on consumer goods and

services and save 30 cents. CONSUMPTION AND SAVING • What happens to the rest of the dollar of income, the fraction (1 - c), that is not spent on consumption? If it is not spent, it must be saved. Income is either spent or saved; • There are no other uses to which it can be put. It follows that any theory that explains consumption is equivalently explaining the behavior of saving. More formally, look at equation, which states that income not spent on consumption is saved: S = Y – C

The Consumption–Income Relationship The consumption function of equation C =C +cY, provides a good initial description of the consumption–income relationship. Annual per capita consumption and disposable personal income data for the United States for the years since 1960 are plotted in Figure below that disposable personal income is the amount of Income households have available for either spending or saving after paying taxes and receiving transfers.

EQUILIBRIUM INCOME AND OUTPUT

SAVING AND INVESTMENT In equilibrium, planned investment equals saving. The equality between saving and investment can be seen directly from national income accounting. Since income is either spent or saved Y= C + S Y= C + I Without government and foreign trade, aggregate demand equals consumption plus investment, Putting the two together, we have C + S= C + I or S = I

If we include government and foreign trade in the analysis, we get a more complete picture relating investment to saving and also to net exports. Now income can either be spent, saved, or paid in taxes, so Y= C + S + TA - TR and complete aggregate demand Is Y = C + I + NX Therefore, C + I + G + NX = C + S + TA – TR I= S + (TA – TR – G) – NX That is, investment equals private savings (S) plus the government budget surplus (TA - TR - G) minus net exports (NX), or plus net imports

The Keynesian Cross (by Mankiw, 8th Edition Macroeconomics) In The General Theory Keynes proposed that an economy's total income is, in the short run, determined largely by the spending plans of households, businesses, and government. The more people want to spend, the more goods and services firms can sell. The more firms can sell, the more output they will choose to produce and the more workers they will choose to hire. Keynes believed that the problem during recessions and depressions is inadequate spending. The Keynesian cross is an attempt to model this insight.

Keynesian Cross Actual expenditure is the amount households, firms, and the government spend on goods and services Planned expenditure is the amount households, firms, and the government would like to spend on goods and services. Why would actual expenditure ever differ from planned expenditure? The answer is that firms might engage in unplanned inventory investment because their sales do not meet their expectations. When firms sell less of their product than they planned, their stock of inventories automatically rises; conversely, when firms sell more than planned, their stock of inventories

falls. Because these unplanned changes in inventory are counted as investment spending by firms, actual expenditure can be either above or below planned expenditure.

This equation states that consumption depends on disposable income (Y − T), which is total income Y minus taxes T. To keep things simple, for now we take planned investment as exogenously fixed: we assume that fiscal policy—the levels of government purchases and taxes—is fixed:

The Economy in Equilibrium The next piece of the Keynesian cross is the assumption that the economy is in equilibrium when actual expenditure equals planned expenditure. This assumption is based on the idea that when people's plans have been realized, they have no reason to change what they are doing. Recalling that Y as GDP equals not only total income but also total actual expenditure on goods and services.

Balanced Budget Multiplier:

According to Keynes, any increase in autonomous expenditure will have a multiplier effect.So government expenditure, like autonomous investment also has a multiplier effect.

For instance, for a change in government expenditure (G), we have

Another policy-controlled element of autonomous expenditure is tax which is used to finance government expenditure. Although taxes depend on income or its change, since government expenditure is financed largely by taxes, the two variables — government expenditure and taxes (T) — are considered together while assessing the effect of G on Y.

For a change in taxes, we have

A one rupee increase in G has the same effect on equilibrium income as a one-rupee increase in I. Each implies a one-rupee increase in autonomous expenditure. So each has the same multiplier effect. In each case the initial increase in income generates induced increases in consumption, through the multiplier.

The effect of an increase in G can be shown exactly in the same way as we have shown the effect of an increase in I. The C + I + G0 schedule will shift upward to C + I + G1, where G1 = G + ΔG. A diagram similar to Fig. 8.11 can be drawn to show this.

If ΔG = ΔI, ΔY will be the same because ΔY = 1/1-b(ΔG) = 1/1-b(ΔI), i.e., investment multiplier and government ex-penditure multiplier are equal. In this case the I + G schedule will shift upward from I0 + G0 to I0 + G1 where G1 – G0 = AG is the same as I1 – I0 = AI in Fig. 8.11 After all, both I and G are injec-tions into the circular flow of income.

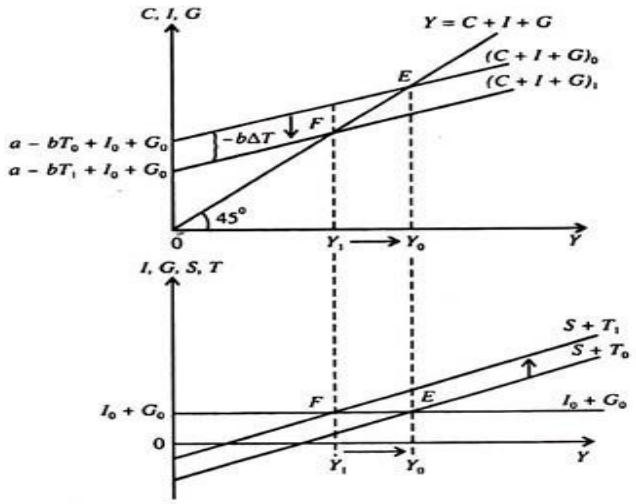


Fig. 8.12 The Effect of an Increase in Taxes on Equilibrium Income

when the government imposes an additional tax of ΔT1, the aggregate demand schedule shifts down by (-ΔT), that is, by less ΔT since the MPC or (b) < 1. The reason is that, at a given level of income, a one-rupee increase in taxes reduces disposable income by one rupee but reduces consumption spending by less than one rupee since b < 1.

The rest of the fall in income by one rupee is absorbed by a fall in saving, by MPS (or S = 1 – b) times the fall in income. Since a one-rupee change in taxes shifts the aggregate curve by only a fraction (- b) of one rupee, the effect of a one-rupee increase in taxes on equilibrium income is -b times the autonomous expenditure multiplier, i.e., -b (1 1-b) = -b/1-b.

The value of BBM (symbolised by KB) is unity. It can also be expressed in the following way:

Since KG is positive and KT is negative, the net effect of balanced budget is not neutral. Income changes by an amount equal to a change in government expenditure and tax receipt. So the value of BBM must be 1. Since KT is one less than KG, a balanced budget must have a value of one.

However, in reality, the BBM may have a value less than one. In this model, we assumed the uniform MPC for all taxpayers and beneficiaries of government expenditure. However, if MPC of the taxpayers is different from those of the recipients of government expenditure, the value of BBM would be less than unity, but greater than zero. Thus, the BBM must not have value equal to (one) 1 in a complex society (e.g., in the IS-LM model)

Functions of Money

Money is often defined in terms of the three functions or services that it provides. Money serves as a medium of exchange, as a store of value, and as a unit of account.

Medium of exchange. Money's most important function is as a medium of exchange to facilitate transactions. Without money, all transactions would have to be conducted by barter, which involves direct exchange of one good or service for another. The difficulty with a barter system is that in order to obtain a particular good or service from a supplier, one has to possess a good or service of equal value, which the supplier also desires. In other words, in a barter system, exchange can take place only if there is a double coincidence of wants between two transacting parties. The likelihood of a double coincidence of wants, however, is small and makes the exchange of goods and services rather difficult. Money effectively eliminates the double coincidence of wants problem by serving as a medium of exchange that is accepted in all transactions, by all parties, regardless of whether they desire each others' goods and services.

Store of value. In order to be a medium of exchange, money must hold its value over time; that is, it must be a store of value. If money could not be stored for some period of time and still remain valuable in exchange, it would not solve the double coincidence of wants problem and therefore would not be adopted as a medium of exchange. As a store of value, money is not unique; many other stores of value exist, such as land, works of art, and even baseball cards and stamps. Money may not even be the best store of value because it depreciates with inflation. However, money is more liquid than most other stores of value because as a medium of exchange, it is readily accepted everywhere. Furthermore, money is an easily transported store of value that is available in a number of convenient denominations.

Unit of account. Money also functions as a unit of account, providing a common measure of the value of goods and services being exchanged. Knowing the value or price of a good, in terms of money, enables both the supplier and the purchaser of the good to make decisions about how much of the good to supply and how much of the good to purchase.

Adjustment Mechanism In Economics

The long-run self-adjustment mechanism is one process that can bring the economy back to “normal” after a shock. The idea behind this assumption is that an economy will self-correct; shocks matter in the short run, but not the long run. At its core, the self-correction mechanism is about price adjustment. When a shock occurs, prices will adjust and bring the economy back to long-run equilibrium.

Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity.

Monetary policy consists of the process of drafting, announcing, and implementing the plan of actions taken by the central bank, currency board, or other competent monetary authority of a country that controls the quantity of money in an economy and the channels by which new money is supplied. Monetary policy consists of management of money supply and interest rates, aimed at achieving macroeconomic objectives such as controlling inflation, consumption, growth, and liquidity. These are achieved by actions such as modifying the interest rate, buying or selling government bonds, regulating foreign exchange rates, and changing the amount of money banks are required to maintain as reserves. Some view the role of the International Monetary Fund as this.

Types of Monetary Policy

Central banks use contractionary monetary policy to reduce inflation. They reduce the money supply by restricting the amount of money banks can lend. The banks charge a higher interest rate, making loans more expensive. Fewer businesses and individuals borrow, slowing growth.

Central banks use expansionary monetary policy to lower unemployment and avoid recession. They increase liquidity by giving banks more money to lend. Banks lower interest rates, making loans cheaper. Businesses borrow more to buy equipment, hire employees, and expand their operations. Individuals borrow more to buy more homes, cars, and appliances. That increases demand and spurs economic growth.

Fiscal Policy

The objective of fiscal policy is to create healthy economic growth. Ideally, the economy should grow between 2–3% a year, unemployment will be at its natural rate of 4.7–5.8%, and inflation will be at its target rate of 2%. The business cycle will be in the expansion phase.Fiscal policy is the means by which a government adjusts its spending levels and tax rates to monitor and influence a nation's economy. It is the sister strategy to monetary policy through which a central bank influences a nation's money supply. These two policies are used in various combinations to direct a country's economic goals. Here's a look at how fiscal policy works, how it must be monitored, and how its implementation may affect different people in an economy.

Fiscal policy is based on the theories of British economist John Maynard Keynes. Also known as Keynesian economics, this theory basically states that governments can influence macroeconomic productivity levels by increasing or decreasing tax levels and public spending. This influence, in turn, curbs inflation (generally considered to be healthy when between 2% and 3%), increases employment,

and maintains a healthy value of money. Fiscal policy plays a very important role in managing a country's economy. For example, in 2012 many worried that the fiscal cliff, a simultaneous increase in tax rates and cuts in government spending set to occur in January 2013, would send the U.S. economy back into recession.

General objectives of Fiscal Policy are given below

1. To maintain and achieve full employment.
2. To stabilize the price level.
3. To stabilize the growth rate of the economy.
4. To maintain equilibrium in the Balance of Payments.
5. To promote the economic development of underdeveloped countries.

Expansionary Fiscal Policy

There are two types of fiscal policy. The most widely-used is expansionary, which stimulates economic growth. Congress uses it to end the contraction phase of the business cycle when voters are clamoring for relief from a recession. The government either spends more, cuts taxes, or both. The idea is to put more money into consumers' hands, so they spend more. The increased demand forces businesses to add jobs to increase supply.

Politicians debate about which works better. Advocates of supply-side economics prefer tax cuts because they say it frees up businesses to hire more workers to pursue business ventures. Advocates of demand-side economics say additional spending is more effective than tax cuts. Examples include public works projects, unemployment benefits, and food stamps. The money goes into the pockets of consumers, who go right out and buy the things businesses produce.

An expansionary fiscal policy is impossible for state and local governments because they are mandated to keep a balanced budget. If they haven't created a surplus during the boom times, they must cut spending to match lower tax revenue during a recession. That makes the contraction worse. Fortunately, the federal government has no such constraints; it's free to use expansionary policy whenever it's needed. Unfortunately, it also means Congress created budget deficits even during economic booms—despite a national debt ceiling. As a result, the critical debt-to-gross domestic product ratio has exceeded 100%.

Contractionary Fiscal Policy

The second type of fiscal policy is contractionary fiscal policy, which is rarely used. Its goal is to slow economic growth and stamp out inflation. The long-term impact of inflation can damage the standard of living as much as a recession. The tools of contractionary fiscal policy are used in reverse. Taxes are increased, and spending is cut. You can imagine how wildly unpopular this is among voters. Only lame

duck politicians could afford to implement contractionary policy.

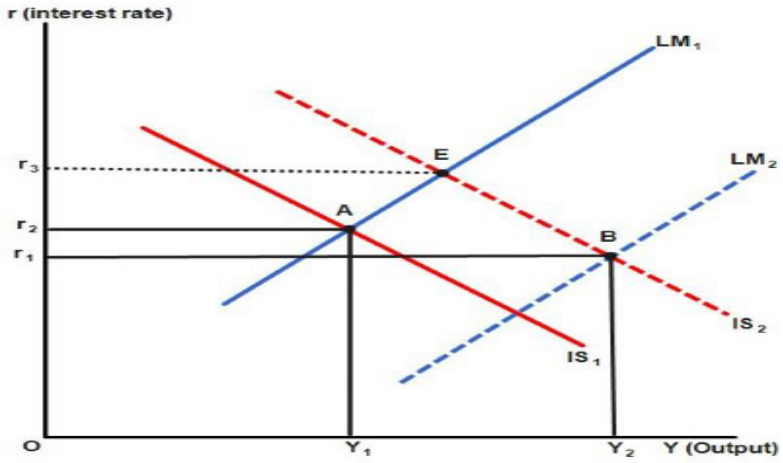
Tools

The first tool is taxation. That includes income, capital gains from investments, property, and sales. Taxes provide the income that funds the government. The downside of taxes is that whatever or whoever is taxed has less income to spend on themselves, which is why taxes are unpopular.

The second tool is government spending—which includes subsidies, welfare programs, public works projects, and government salaries. Whoever receives the funds has more money to spend, which increases demand and economic growth.

Policy Mix

The use of expansionary monetary policy affects the LM curve and shifts it to the right. Expansionary fiscal policy on the other hand, shifts the S curve to the right. When the government uses a coordinated use of both monetary and fiscal policy, shifts occur in both the LM curve a well as the IS curve.



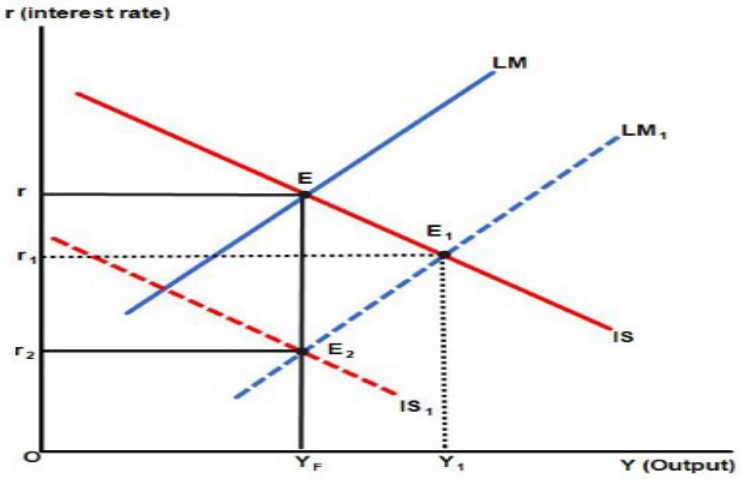
As shown in the figure, the economy is in equilibrium at point A where IS1 curve intersects with LM1 curve. At this point, the rate of interest is Or2 and income level is OY1. When the government adopted an expansionary fiscal policy in the form of increased government expenditures (G↑) or decreased taxes (T↓), IS Curve shifts from IS1 to IS2. If an expansionary monetary policy is adopted simultaneously, the interest rate further increases to Or3.

So, in order to encourage investment made by business firms and reduce the interest rate to achieve full employment, the central monetary authority increases the supply of money through open market purchase of securities. This causes the Lm curve to shift rightwards from LM1 to LM2.

The fiscal policy has led to the New IS curve, that is IS2, and the monetary policy has led to a new LM curve, LM2. The intersection point of the curve IS2 and LM2 is the new equilibrium point B, where the

interest rate has fallen to Or1 and the income level has risen to OY2. Thus, the expansionary fiscal policy followed by expansionary monetary policy assist one another to maintain an equilibrium level of income/output in the economy.

-Assuming that the economy is at full employment level of income, the following diagram illustrates the economic situation at full employment and further shows how fiscal-monetary mix policies affect the equilibrium level of income/output.



In the figure, income level at full employment is OYF. Initially, at OYF level of income, the IS curve intersects LM curve at point E. When the economy faces a downturn due to the occurrence of unfavorable events, more investment should be injected into the economy. For this, the monetary authority increases the supply of money which shifts the LM curve rightwards to LM1. The curve LM1 then intersects with the IS curve to form a new equilibrium point at E1 where, interest rate is lower at Or1, and the increased level of income is OY1.

However, the increase in the level of national income being greater than the existing level of employment level, leads to inflation. So, the economy must change its fiscal-monetary policies mix.

For this, the expansionary monetary policy is combined with a contractionary fiscal policy. Subsequently, the government reduces its expenditures (G↓), and increases taxes (T↑) which shifts the IS curve to IS1. Now, LM curve intersects IS1 at point E2, which is the new equilibrium point. At this point, the interest rate is reduced to Or2 whereas, the income level at full employment is OYF.

Thus, the level of equilibrium is maintained at lower interest rates through the monetary-fiscal policy mix as the reduced rate of interest would increase the level of investment in the economy, and the decrease in government expenditure and increase in tax would maintain a control over inflation.

Fisher's Quantity Theory Of Money

There are two approaches to analyze the Quantity Theory of Money. These are Fisher's Theory and

Cash Balance Approach. In this article, we will look at both these approaches to understand the Quantity Theory of Money in detail.

The quantity theory of money states that the quantity of money is the main determinant of the price level or the value of money. Any change in the quantity of money produces an exactly proportionate change in the price level

Fisher has explained his theory in terms of his equation of exchange:

PT=MV+ M' V'

Where P = price level, or 1 IP = the value of money;

M = the total quantity of legal tender money;

V = the velocity of circulation of M;

M' – the total quantity of credit money;

V' = the velocity of circulation of M;

T = the total amount of goods and services exchanged for money or transactions performed by money.

This equation equates the demand for money (PT) to supply of money (MV=M'V). The total volume of transactions multiplied by the price level (PT) represents the demand for money.

According to Fisher, PT is SPQ. In other words, price level (P) multiplied by quantity bought (Q) by the community (S) gives the total demand for money. This equals the total supply of money in the community consisting of the quantity of actual money M and its velocity of circulation V plus the total quantity of credit money M' and its velocity of circulation V'. Thus the total value of purchases (PT) in a year is measured by MV+M'V'. Thus the equation of exchange is PT=MV+M'V'. In order to find out the effect of the quantity of money on the price level or the value of money, we write the equation as

P= MV+M'V'

Fisher points out the price level (P) (M+M') provided the volume of tra remain unchanged. The truth of this proposition is evident from the fact that if M and M' are doubled, while V, V and T remain constant, P is also doubled, but the value of money (1/P) is reduced to half.

Fisher's quantity theory of money is explained with the help of Figure 65.1. (A) and (B). Panel A of the figure shows the effect of changes in the quantity of money on the price level. To begin with, when the quantity of money is M, the price level is P.

When the quantity of money is doubled to M2, the price level is also doubled to P2. Further, when the quantity of money is increased four-fold to M4, the price level also increases by four times to P4. This relationship is expressed by the curve P = f (M) from the origin at 45°.

In panel B of the figure, the inverse relation between the quantity of money and the value of money is depicted where the value of money is taken on the vertical axis. When the quantity of money is M1 the value of money is HP. But with the doubling of the quantity of money to M2, the value of money becomes one-half of what it was before, 1/P2. And with the quantity of money increasing by four-fold to M4, the value of money is reduced by 1/P4. This inverse relationship between the quantity of money and the value of money is shown by downward sloping curve 1/P = f (M).

Assumptions of the Theory:

Fisher's theory is based on the following assumptions:

1. P is passive factor in the equation of exchange which is affected by the other factors.
2. The proportion of M' to M remains constant.
3. V and V are assumed to be constant and are independent of changes in M and M'.
4. T also remains constant and is independent of other factors such as M, M, V and V.
5. It is assumed that the demand for money is proportional to the value of transactions.
6. The supply of money is assumed as an exogenously determined constant.
7. The theory is applicable in the long run.
8. It is based on the assumption of the existence of full employment in the economy.

Criticisms of the Theory:

The Fisherian quantity theory has been subjected to severe criticisms by economists.

1. Truism:

According to Keynes, "The quantity theory of money is a truism." Fisher's equation of exchange is a simple truism because it states that the total quantity of money (MV+M'V') paid for goods and services must equal their value (PT). But it cannot be accepted today that a certain percentage change in the quantity of money leads to the same percentage change in the price level.

2. Other things not equal:The direct and proportionate relation between quantity of money and price level in Fisher's equation is based on the assumption that "other things remain unchanged". But in real life, V, V and T are not constant. Moreover, they are not independent of M, M' and P. Rather, all elements in Fisher's equation are interrelated and interdependent. For instance, a change in M may cause a change in V.

3. Constants Relate to Different Time:Prof. Halm criticises Fisher for multiplying M and V because M relates to a point of time and V to a period of time. The former is a static concept and the latter a dynamic. It is therefore, technically inconsistent to multiply two non-comparable factors.

4. Fails to Measure Value of Money:Fisher's equation does not measure the purchasing power of money but only cash transactions, that is, the volume of business transactions of all kinds or what Fisher calls the volume of trade in the community during a year. But the purchasing power of money (or value of money) relates to transactions for the purchase of goods and services for consumption. Thus the quantity theory fails to measure the value of money.

Quantity Theory of Money – Cash Balance Approach

The Cash Balance Approach states that it is not the total money, but that portion of the cash balance that people spend which influence the price levels. Most people hold a cash balance in their hands rather than spending the entire amount all at once. According to this approach,

M = PKT

Where,

M – The money supply

P – The price level

T – The total volume of transactions and

K is the demand for money that people want to hold as cash balance

Quantity Theory of Money – Keynes

Keynes reformulated the Quantity Theory of Money. According to him, money does not directly affect the price level. Also, a change in the quantity of money can lead to a change in the rate of interest.

Further, with a change in the rate of interest, the volume of investment can change. Also, this change in investment volume can lead to a change in income, output, and employment along with a change in the cost of production.

Finally, all these factors will lead to a change in the prices of goods and services. In simple words, the Keynesian version of the Quantity Theory integrates the monetary theory with the general theory of value.

Transmission Mechanism:

Keynes' great merit lies in removing the old fallacy that prices are directly determined by the quantity of money. His theory of money and prices brings forth the truth that prices are determined primarily by the cost of production.

Keynes does not agree with the old analysis which establishes a direct causal relationship between the quantity of money and the level of prices. He believes that changes in the quantity of money do not affect the price level (value of money) directly but indirectly through other elements like the rate of

interest, the level of investment, income, output and employment. The initial impact of the changes in the total quantity of money falls on the rate of interest rather than on prices.

The transmission mechanism process that follows in Keynes is like this:

Increases in the quantity of money → result in a fall in the rate of interest → which encourages investment → which in turn, raises income, output and employment → it results in raising the cost of production → this results in raising prices. The traditional theory ignored the influence of the quantity of money on the rate of interest, and thereby on output and goes directly from increase in the quantity of money to increase in the level of prices. Therein lay the fault of its analysis.

Keynes' version of the quantity theory stands in sharp comparison to the old classical theory and is considered superior to it on the following grounds:

(i) It Analyses the Casual Process:

Keynes' great merit lies in removing the old notion that prices are directly determined by the quantity of money. He brings to the fore the true and real causal process which exists between the quantity of money and prices. The relationship that exists is indirect and is brought through changes in the rate of interest.

(ii) It Does not Assume Full Employment:

The quantity theory of money, like all classical doctrines, is based on the assumption of full employment. As long as the human and material resources were taken to be fully employed, it was easy for the classical thinkers to say that an increase in the quantity of money was associated with or followed by a rise in the price level. Since, money in the classical scheme could not affect employment, it could raise prices only.

(iii) When to Dread Inflation:

Keynesian approach to the quantity theory of money helps us to look at inflation entirely from a different perspective. It tells us when dread inflation and when not to dread it. As long as there is unemployment of resources, inflation is not to be feared as it results in an increase in employment and output. But once the level of full employment is attained, true inflation begins and it becomes a real threat.

According to classicals, every increase in money supply results in inflation (as full employment was always presumed). To Keynes, only that increase in money supply results in inflation which takes place beyond the level of full employment. Thus, Keynesian version shows a great advance on the traditional version of the quantity theory of money.

(iv) It Integrates Monetary Theory with the Theory of Value:Another great merit of Keynes theory of

money and prices is that it integrates monetary theory with the theory of value. Keynes gave up the traditional division of the economy into the real sector and the monetary sector and pointed out that there could be no monetary economy in which money was neutral. The integration of the theory of money with the theory of value on the one hand and with the theory of output on the other, was achieved through the rate of interest the missing link (rate of interest) was at last discovered.

Friedman's Theory:

In his reformulation of the quantity theory, Friedman asserts that "the quantity theory is in the first instance a theory of the demand for money. It is not a theory of output, or of money income, or of the price level." The demand for money on the part of ultimate wealth holders is formally identical with that of the demand for a consumption service. He regards the amount of real cash balances (M/P) as a commodity which is demanded because it yields services to the person who holds it. Thus money is an asset or capital good. Hence the demand for money forms part of capital or wealth theory.

For ultimate wealth holders, the demand for money, in real terms, may be expected to be a function primarily of the following variables:

1. Total Wealth:

The total wealth is the analogue of the budget constraint. It is the total that must be divided among various forms of assets. In practice, estimates of total wealth are seldom available. Instead, income may serve as an index of wealth. Thus, according to Friedman, income is a surrogate of wealth.

2. The Division of Wealth between Human and Non-Human Forms:

The major source of wealth is the productive capacity of human beings which is human wealth. But the conversion of human wealth into non-human wealth or the reverse is subject to institutional constraints. This can be done by using current earnings to purchase non-human wealth or by using non-human wealth to finance the acquisition of skills. Thus the fraction of total wealth in the form of non-human wealth is an additional important variable. Friedman calls the ratio of non-human to human wealth or the ratio of wealth to income as w.

3. The Expected Rates of Return on Money and Other Assets:

These rates of return are the counterparts of the prices of a commodity and its substitutes and complements in the theory of consumer demand. The nominal rate of return may be zero as it generally is on currency, or negative as it sometimes is on demand deposits, subject to net service charges, or positive as it is on demand deposits on which interest is paid, and generally on time deposits. The nominal rate of return on other assets consists of two parts: first, any currently paid yield or cost, such as

interest on bonds, dividends on equities, and costs of storage on physical assets, and second, changes in the prices of these assets which become especially important under conditions of inflation or deflation.

4. Other Variables:

Variables other than income may affect the utility attached to the services of money which determine liquidity proper. Besides liquidity, variables are the tastes and preferences of wealth holders. Another variable is trading in existing capital goods by ultimate wealth holders. These variables also determine the demand function for money along-with other forms of wealth. Such variables are noted as u by Friedman.

Broadly, total wealth includes all sources of income or consumable services. It is capitalised income. By income, Friedman means "permanent income" which is the average expected yield on wealth during its life time.

Wealth can be held in five different forms: money, bonds, equities, physical goods, and human capital. Each form of wealth has a unique characteristic of its own and a different yield.

1. Money is taken in the broadest sense to include currency, demand deposits and time deposits which yield interest on deposits. Thus money is luxury good. It also yields real return in the form of convenience, security, etc. to the holder which is measured in terms of the general price level (P).

2. Bonds are defined as claim to a time stream of payments that are fixed in nominal units.

3. Equities are defined as a claim to a time stream of payments that are fixed in real units.

4. Physical goods or non-human goods are inventories of producer and consumer durable.

5. Human capital is the productive capacity of human beings. Thus each form of wealth has a unique characteristic of its own and a different yield either explicitly in the form of interest, dividends, labour income, etc., or implicitly in the form of services of money measured in terms of P, and inventories. The present discounted value of these expected income flows from these five forms of wealth constitutes the current value of wealth which can be expressed as:

$W = y/r$

Where W is the current value of total wealth, Y is the total flow of expected income from the five forms of wealth, and r is the interest rate. This equation shows that wealth is capitalised income. Friedman in his latest empirical study Monetary Trends in the United States and the United Kingdom (1982) gives the following demand function for money for an individual wealth holder with slightly different notations from his original study of 1956 as:

$M/P = f (y, w; Rm, Rb, Re, gp, u)$

Where M is the total stock of money demanded; P is the price level; y is the real income; w is the

fraction of wealth in non-human form: Rm is the expected nominal rate of return on money; Rb is the expected rate of return on bonds, including expected changes in their prices; Re is the expected nominal rate of return on equities, including expected changes in their prices; gp=(1/P) (dP/dt) is the expected rate of change of prices of goods and hence the expected nominal rate of return on physical assets; and и stands for variables other than income that may affect the utility attached to the services of money.

The demand function for business is roughly similar, although the division of total wealth and human wealth is not very useful since a firm can buy and sell in the market place and hire its human wealth at will. But the other factors are important.

The aggregate demand function for money is the summation of individual demand functions with M and y referring to per capita money holdings and per capita real income respectively, and w to the fraction of aggregate wealth in non-human form.

The demand function for money leads to the conclusion that a rise in expected yields on different assets (Rb, Re and gp) reduces the amount of money demanded by a wealth holder, and that an increase in wealth raises the demand for money. The income to which cash balances (M/P) are adjusted is the expected long term level of income rather than current income being received.

Empirical evidence suggests that the income elasticity of demand for money is greater than unity which means that income velocity is falling over the long run. This means that the long run demand for money function is stable and is relatively interest inelastic, as shown in fig. 68.1. where MD is the demand for money curve. If there is change in the interest rate, the long-run demand for money is negligible.

In Friedman's restatement of the quantity theory of money, the supply of money is independent of the demand for money. The supply of money is unstable due to the actions of monetary authorities. On the other hand, the demand for money is stable. It means that money which people want to hold in cash or bank deposits is related in a fixed way to their permanent income.

If the central bank increases the supply of money by purchasing securities, people who sell securities will find their holdings of money have increased in relation to their permanent income. They will, therefore, spend their excess holdings of money partly on assets and partly on consumer goods and services.

This spending will reduce their money balances and at the same time raise the nominal income. On the contrary, a reduction in the money supply by selling securities on the part of the central bank will reduce the holdings of money of the buyers of securities in relation to their permanent income.

They will, therefore, raise their money holdings partly by selling their assets and partly by reducing their consumption expenditure on goods and services. This will tend to reduce nominal income. Thus, on both

counts, the demand for money remains stable. According to Friedman, a change in the supply of money causes a proportionate change in the price level or income or in both. Given the demand for money, it is possible to predict the effects of changes in the supply of money on total expenditure and income.

If the economy is operating at less than full employment level, an increase in the supply of money will raise output and employment with a rise in total expenditure. But this is only possible in the short run. Friedman's quantity theory of money is explained in terms of Figure 68.2. Where income (Y) is measured on the vertical axis and the demand for the supply of money are measured on the horizontal axis. MD is the demand for money curve which varies with income. MS is the money supply curve which is perfectly inelastic to changes in income. The two curves intersect at E and determine the equilibrium income OY. If the money supply rises, the MS curve shifts to the right to M1S1. As a result, the money supply is greater than the demand for money which raises total expenditure until new equilibrium is established at E1 between MD and M1S1, curves. The income rises to OY1.

Thus Friedman presents the quantity theory as the theory of the demand for money and the demand for money is assumed to depend on asset prices or relative returns and wealth or income. He shows how a theory of the stable demand for money becomes a theory of prices and output. A discrepancy between the nominal quantity of money demanded and the nominal quantity of money supplied will be evident primarily in attempted spending. As the demand for money changes in response to changes in its determinants, it follows that substantial changes in prices or nominal income are almost invariably the result of changes in the nominal supply of money.

Aggregate Demand

There are five components of aggregate demand. These are the same as the components of GDP.

Consumer spending. That's what families spend on final products that aren't used for investment.

Investment spending by business. It only includes purchases of equipment, buildings, and inventory.

Government spending on goods and services. It does not include transfer payments, such as Social Security, Medicare, and Medicaid. They aren't included because they don't increase demand. These programs shift demand from one group (taxpayers) to another (beneficiaries).

Exports. That's demand from other countries.

Minus imports.

Aggregate Demand Formula

Aggregate demand is measured by the following mathematical formula.

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

It describes the relationship between demand and its five components.

Aggregate Demand = Consumer Spending + Investment Spending + Government Spending + (Exports-Imports)

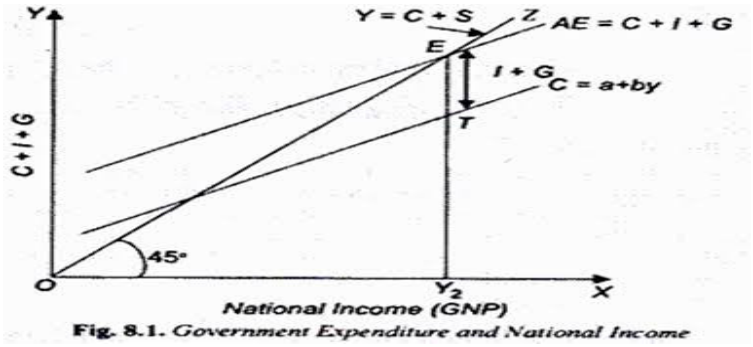


Fig. 8.1. *Government Expenditure and National Income*

Equilibrium AD- AS

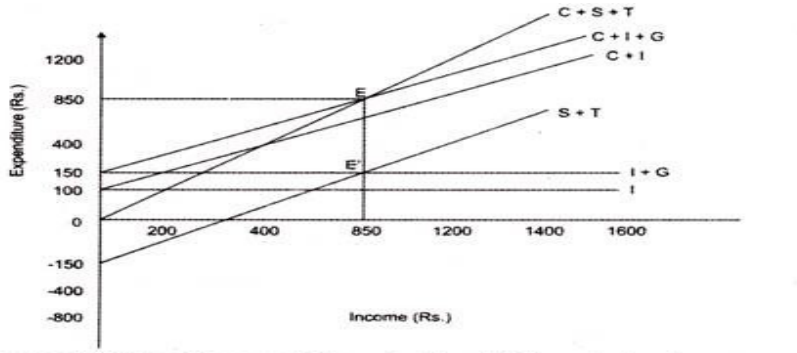
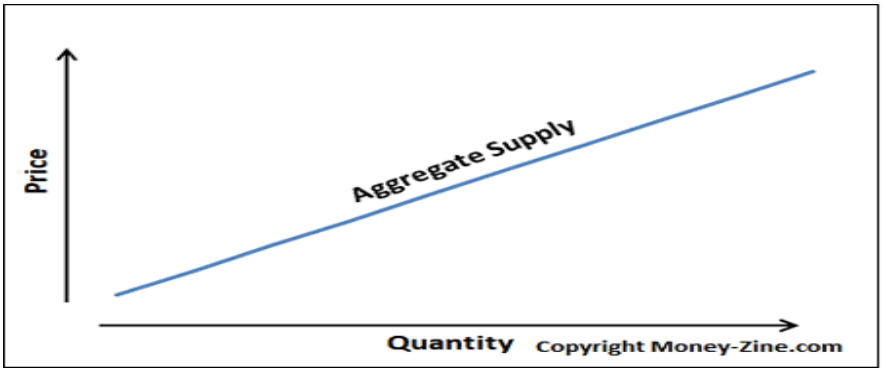


Figure-7: National Income Determination in Three-Sector Economy



Aggregate Supply and Aggregate Demand

Aggregate supply is the total amount of goods and services that firms are willing to sell at a given price in an economy. The aggregate demand is the total amounts of goods and services that will be purchased at all possible price levels.

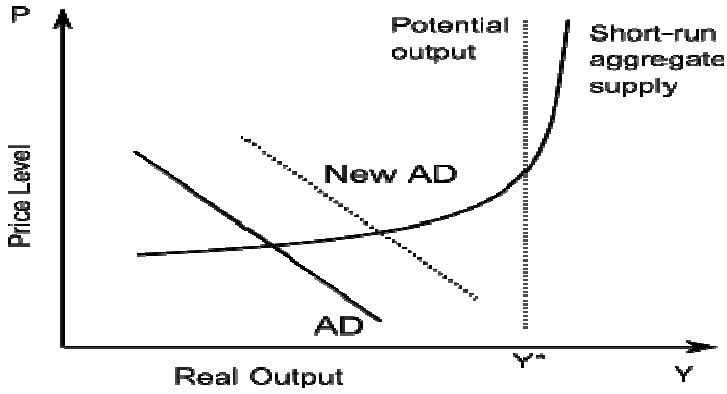
In a standard AS-AD model, the output (Y) is the x-axis and price (P) is the y-axis. Aggregate supply

and aggregate demand are graphed together to determine equilibrium. The equilibrium is the point where supply and demand meet to determine the output of a good or service.

Short-run vs. Long-run Fluctuations

Supply and demand may fluctuate for a number of reasons, and this in turn may affect the level of output. There are noticeable differences between short-run and long-run fluctuations in output.

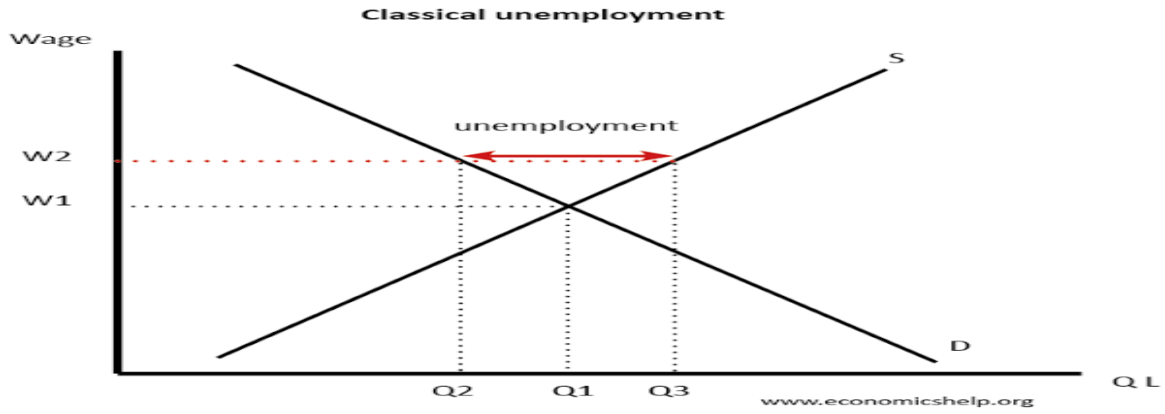
Over the short-run, an outward shift in the aggregate supply curve would result in increased output and lower prices. An outward shift in the aggregate demand curve would also increase output and raise prices. Short-run nominal fluctuations result in a change in the output level. In the short-run an increase in money will increase production due to a shift in the aggregate supply. More goods are produced because the output is increased and more goods are bought because of the lower prices.



AS-AD Model: This AS-AD model shows how the aggregate supply and aggregate demand are graphed to show economic output. The AD curve shifts to the right which increases output and price.

In the long-run, the aggregate supply curve and aggregate demand curve are only affected by capital, labor, and technology. Everything in the economy is assumed to be optimal. The aggregate supply curve is vertical which reflects economists' belief that changes in aggregate demand only temporarily change the economy's total output. In the long-run an increase in money will do nothing for output, but it will increase prices.

Classical Approach



Sticky-Wage Model

The sticky-wage model of the upward sloping short run aggregate supply curve is based on the labor market. In many industries, short run wages are set by contracts. That is, workers are paid based on relatively permanent pay schedules that are decided upon by management or unions or both. When the economy changes, the wage the workers receive cannot adjust immediately.Given that wages are sticky, the chain of events leading from an increase in the price level to an increase in output is fairly straightforward. When the price level rises, the nominal wage remains fixed because this is solely based on the dollar amount of the wage. The real wage, on the other hand, falls because this is based on the purchasing power of the wage. A higher price level means that a given wage is able to purchase fewer goods and services. The sticky wage theory hypothesizes that pay of employees tends to have a slow response to the changes in the performance of a company or the economy. According to the theory, when unemployment rises, the wages of those workers that remain employed tend to stay the same or grow at a slower rate than before rather than falling with the decrease in demand for labor.Specifically, wages are often said to be sticky-down, meaning that they can move up easily but move down only with difficulty. Stickiness, in general, is also often called “nominal rigidity” and the phenomenon of sticky wages is also often referred to as “wage stickiness.”

Breaking Down Sticky Wage Theory

Stickiness is a theorized condition in the market and can apply to more areas than wages alone. Stickiness is a condition wherein a nominal price resists change. While it can often apply to wages, stickiness may also often be used in reference to prices within a market, which is also often called price stickiness. Prices, however, are generally thought of as not being as sticky as wages are, as the prices of

goods often change easily and frequently in response to changes in supply and demand. The aggregate price level, or average level of prices within a market, can become sticky due to a mixture of rigidity and flexibility in pricing. This means that price levels will not respond to large shifts in the economy as quickly as they otherwise would. Wages are often said to work in the same way: some are sticky, causing aggregate wage levels to become sticky as well. While wage stickiness is a popular theory, one increasingly accepted by economists, though some purist neoclassical economists doubt the robustness of the theory. Proponents of the theory have posed a number of reasons as to why wages are sticky. These include the idea that workers are much more willing to accept pay raises than cuts, the idea that some workers are union members with long-term contracts and the idea that a company may not want to expose itself to the bad press associated with wage cuts.

Supply Shock

A supply shock is an event that suddenly increases or decreases the supply of a commodity or service, or of commodities and services in general. This sudden change affects the equilibrium price of the good or service or the economy's general price level. In the short run, an economy-wide negative supply shock will shift the aggregate supply curve leftward, decreasing the output and increasing the price level. For example, the imposition of an embargo on trade in oil would cause an adverse supply shock, since oil is a key factor of production for a wide variety of goods. A supply shock can cause stagflation due to a combination of rising prices and falling output. In the short run, an economy-wide positive supply shock will shift the aggregate supply curve rightward, increasing output and decreasing the price level. A positive supply shock could be an advance in technology (a technology shock) which makes production more efficient, thus increasing output.

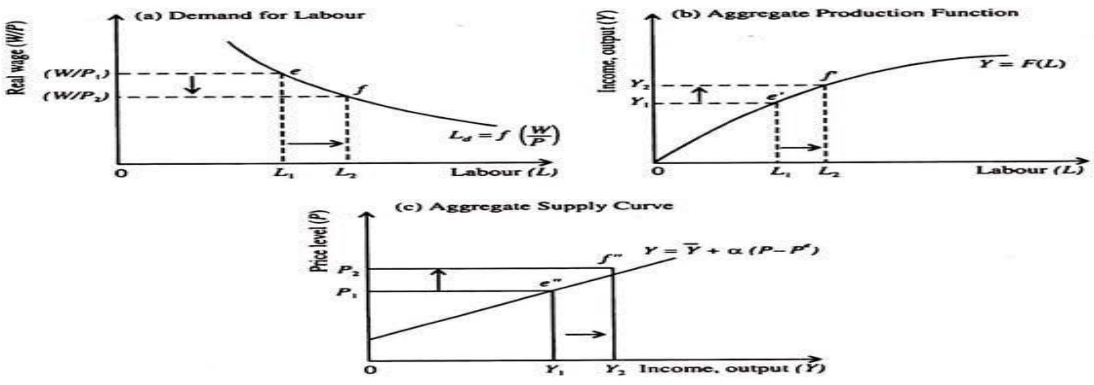
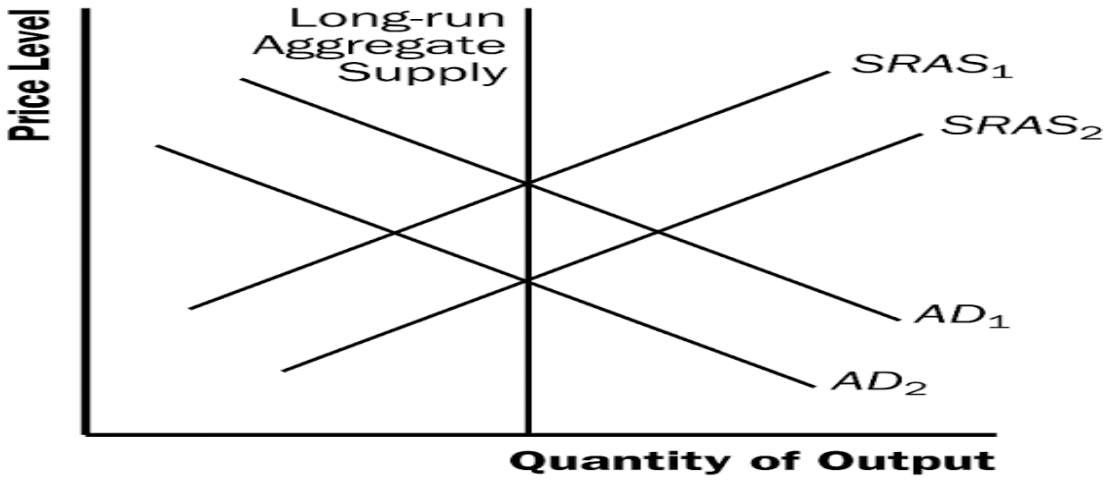


Fig. 13.2 The Derivation of the *AS* Curve in the Sticky-wage Model



Wage Determination

Classical economists argue that wages—the price of labor—are determined (like all prices) by supply and demand. They call this the market theory of wage determination. When workers sell their labor, the price they can charge is influenced by several factors on the supply side and several factors on the demand side. The most basic of these is the number of workers available (supply) and the number of workers needed (demand). In addition, wage levels are shaped by the skill sets workers bring and employers need, as well as the location of the jobs being offered. When the city recently named by Forbes Magazine as the most miserable city in America (we don't want to make them more miserable by naming them; look it up on the Google) advertises for a city planner, it may have to sweeten the pot to attract good talent. The interplay between all of these factors will eventually cause wages to settle—that is, the number of workers, the number of jobs, the skills involved, and the location of the jobs will eventually lead workers and employers to reach a series of wage agreements. If employers (demand) cannot find enough workers to meet their needs, they will keep raising their wage offers until more workers are attracted. If workers are in abundance (supply), wages will fall until the surplus labor decides to go elsewhere in search of jobs. When supply and demand meet, the equilibrium wage rate is established. Long story short: the price of labor is determined in the free market just like every other price, by the intersection of supply and demand. But what happens if the equilibrium wage rate is less than the minimum wage? What if unemployment is so bad in your town that thousands of people are willing to work for $4 an hour; sure, it's way less than minimum wage but anything is better than nothing, right? If you play around with your supply and demand curves, you'll see that an artificial wage floor should increase unemployment among low-wage workers. That creates an interesting dilemma for policymakers, of course: the minimum wage helps those who have jobs that would otherwise pay less, of

course, and (as you'll see on the next page) also has the effect of lifting wages even for non-minimum-wage workers. But that comes at the cost of increasing joblessness. Once again, as ever, we have a case of tradeoffs and opportunity costs

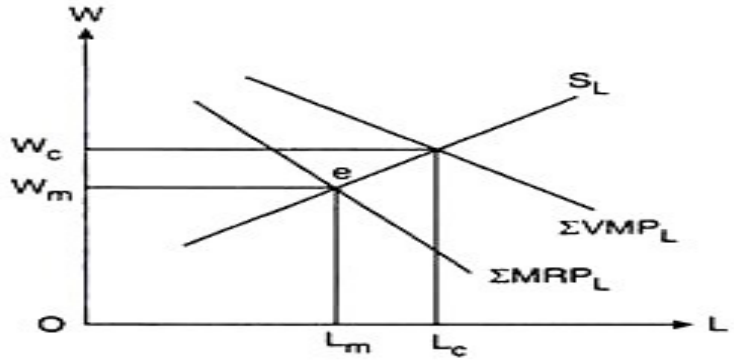


Fig. 16.1 Wage rate determination—monopoly in the product market and competition in the factor (labour) market

Some of the relevant factors are listed below

Compensating wage differentials - higher pay can often be some reward for risk-taking in certain jobs, working in poor conditions and having to work unsocial hours.

A reward for human capital - in a competitive labour market equilibrium, wage differentials compensate workers for (opportunity and direct) costs of human capital acquisition. There is an opportunity cost in acquiring qualifications - measured by the current earnings foregone by staying in full or part-time education. Different skill levels - the gap between poorly skilled and highly skilled workers gets wider each year. One reason is that the market demand for skilled labour grows more quickly than the demand for semi-skilled workers. This pushes up pay levels. Highly skilled workers are often in inelastic supply and rising demand forces up the "going wage rate" in an industry.

Differences in labour productivity and revenue creation - workers whose efficiency is highest and ability to generate revenue for a firm should be rewarded with higher pay. City economists and analysts are often highly paid not least because they can claim annual bonuses based on performance. Top sports stars can command top wages because of their potential to generate extra revenue from ticket sales and merchandising. Trade unions and their collective bargaining power - unions might exercise their bargaining power to offset the power of an employer in a particular occupation and in doing so achieve a mark-up on wages compared to those on offer to non-union members Employer discrimination is a factor that cannot be ignored despite over twenty years of equal pay legislation in place.

HISTORY OF ECONOMIC THOUGHT (205)

Introduction and Definitions

History of economic thought deals with different thinkers and theories in the subject that became political economy and later economics, from the ancient world to the present day. It encompasses many different schools of economic thought.

History of economics thought deals with the origin and development of economic ideas and their interrelations. It is a historical account of economic doctrines.

According to H.L. Bhatia history of economic thought includes the doctrines and generalizations of various thinkers which deal with the economic phenomena of our life. It went through a lot of evolution with specific contributions from various thinkers that had great impact upon the future of economic thought.

Prof. Schumpeter defines Economic thought as the sum total of all the opinions and desires concerning economic subjects especially with public policies of different times and places. He stated further that the history of economic thought traces the historical change of attitudes. It also speaks about economic problems and various approaches to those problems.

Prof. Haney defines history of economic thought as a critical account of the development of economic ideas, searching into their origin, interrelations and manifestations.

Prof. Bell says the history of economics thought is the study of the heritage left by the writers on economic subject.

History of economc thought is different from Economic History and History of economics.

While History of Economic thought deals with the development of economic ideas; Economic History is the study of the economic development of a nation or country. On the other hand, History of economics deals with the science of economics.

Even though Economic History and History of Economic Thought constitute separate branches of study they are closely related. Economic ideas are directly or indirectly motivated by economic conditions and environment of a country. Ideas and environment are very important hence the close relationship between History of economic thought and Economic History.

The History and development of economic ideas can be studied under three (3) periods, namely;

1. Ancient 2. Medieval and 3. Modern

Ancient Greek writers such as the **philosopher** Aristotle examined ideas about the art of wealth acquisition, and questioned whether property is best left in private or public hands.

In medieval times, with its root medi – meaning “Middle”, and ev – meaning “Age” that is the period in

the history of Europe , the middle Age period from the 5th to the 15th (500 to 1500) century. It started with the fall of the great Western Roman Empire and merged into the Renaissance and the Age of discovery. That is after the "rebirth" of culture that we call Renaissance. Scholastics such as Thomas Aquinas argued that it was a moral obligation of businesses to sell goods at a just price.

The history of economic thought can further be broadly divided into two parts;

1. The Origin and the development of economic ideas before the development of economics as science.
2. The second part deals with economic ideas after the development of economics as a Science. The history of economic thought can be studied and analyzed by adopting different approaches;

1. Deductive or Classical approach
2. Inductive approach
3. Chronological approach
4. Conceptual approach
5. Philosophical approach
6. Neo-Classical approach
7. Welfare approach
8. Keynesian approach
9. Institutional approach

There are a variety of modern **definitions of economics**. Some of the differences may reflect evolving views of the subject itself or different views among economists.

The earlier term for 'economics' was political economy. It was adapted from the French Mercantilist usage of *économie politique*, which extended *economy* from the ancient Greek term for household management to the national realm as public administration of the affairs of state.

The philosopher Adam Smith **(1776)**: defines the subject as "an inquiry into the nature and causes of the wealth of nations," in particular as:

A branch of the science of a statesman or legislator [with the twofold objective of providing] a plentiful revenue or subsistence for the people and to supply the state or commonwealth with a revenue for the public services

J.B.Say **(1803)**: distinguishing the subject from its public-policy uses, defines it as the science *of* production, distribution, and consumption of wealth.

John Stuart Mill **(1844)**: defines the subject in a social context as:

The science which traces the laws of phenomena of society as it arise from the combined operations of

mankind for the production of wealth, so far as those phenomena are not modified by the pursuit of any other subject.

Alfred Marshall in (1890): provides a still widely cited and accepted definition in his textbook *Principles of Economics* (1890) that extends analysis beyond wealth and from the societal to the microeconomic level:

Economics is a study of man in the ordinary business of life. It enquires how he gets his income and how he uses it. Thus, it is on the one side, the study of wealth and on the other and more important side, a part of the study of man.

Lionel Robbins **(1932):** developed implications of what has been termed "perhaps the most commonly accepted current definition of the subject "Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses".

Robbins describes the definition as not *classificatory* in "picking out certain *kinds* of behaviour" but rather *analytical* in "focusing attention on a particular *aspect* of behaviour, the form imposed by the influence of scarcity."

Some subsequent comments criticized the definition as overly broad in failing to limit its subject matter to analysis of markets. From the 1960s, however, such comments abated as the economic theory of maximizing behavior and rational-choice modeling expanded the domain of the subject to areas previously treated in other fields. There are other criticisms as well, such as in scarcity not accounting for the macroeconomics of high unemployment.

ECONOMICS AS A SOCIAL SCIENCE:

The scientific study of the society of human behavior and of social interactions. Economics is one of several social sciences. Others are sociology, political science, Psychology, Geography and anthropology. Economics is considered a social science because it seeks to explain how society deals with the scarcity problem.

Economics is one of several disciplines that apply the scientific method to the study of human behavior in social science. The social part of this phrase means the study of society, human behavior, and social interactions. The science part means the use of the scientific method to describe and explain the world. Economics stands apart from other social sciences because it is the scientific study of human behavior related to the problem of scarcity.

SCIENTIFIC METHOD:

A structured way of investigating and explaining the operation of the world by testing and verifying hypothesized relations. The scientific method is a process of discovery, a method of explaining the way the world operates. Positive economics is the application of the scientific method to economic analysis.

The **scientific method** is a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. To be termed scientific, a method of inquiry is commonly based on empirical or measurable evidence subject to specific principles of reasoning

The Oxford Dictionaries Online define the scientific method as "a method or procedure that has characterized natural science since the 17th century, consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses". Experiments need to be designed to test hypotheses. The most important part of the scientific method is **the experiment**.

The scientific method is a continuous process, which usually begins with observations about the natural world. Human beings are naturally inquisitive, so they often come up with questions about things they see or hear and often develop ideas (hypotheses) about why things are the way they are. The best hypotheses lead to predictions that can be tested in various ways, including making further observations about nature.

In general, the strongest tests of hypotheses come from carefully controlled and replicated experiments that gather empirical data. Depending on how well the tests match the predictions, the original hypothesis may require refinement, alteration, expansion or even rejection. If a particular hypothesis becomes very well supported a general theory may be developed.

The scientific method is the process used to study, explain, and analyze economic phenomena. It helps make sense of the seemingly chaotic events of economic life. The price of gasoline rises. Why? A local factory lays off a hundred employees. Why? The President proposes a tax cut to stimulate the economy. Why?

Answering these questions, and thousands of others, is what the scientific method is all about.

Explaining Things:

The scientific method seeks to explain the mechanisms of the world and how things work. Science seeks to identify the basic laws of nature that govern the world. More to the point, economic science, or positive economics, seeks to explain how the economic world works, to identify the economic laws of nature.

It is one thing to attribute the daily movement of the sun across the sky to the efforts of a Greek god. It is

quite another to explain this movement using gravity and planetary orbits.

The great thing about the ability to explain is the resulting ability to predict. Knowing that the sun's movement is guided by the law of gravity which makes it possible to predict its position tomorrow, next week, or next year. This information helps when doing things like flying to the moon.

Components of the Scientific Method

A little more insight into the scientific method with an overview of several key components ; Model, Theory, Principles, World view, Hypothesis, and Verification.

- **Model** is a theoretical construct representing economic processes by a set of variables and a set of logical and/or quantitative relationships between them. The economic model is a simplified framework designed to illustrate complex processes, often but not always using mathematical techniques. Frequently, economic models posit structural parameters. Structural parameters are underlying parameters in a model or class of models.

A model may have various parameters and those parameters may change to create various properties. Methodological uses of models include investigation, theorizing, and fitting theories to the world.

- **Theory:** The starting point, but also the end result of doing science is the theory. A theory is a scientifically accepted, interrelated body of general principles used to explain and understand some aspect of the world. A theory creates a framework for investigating and explaining the world. It helps make sense out of what might appear to be random events. A theory offers an explanation for these events. It explains WHY things happen.
- **Principles:** Principles are generally accepted, verified, fundamental laws of nature. As a house is constructed from concrete, lumber, and nails, a theory is constructed from principles. To be a fundamental law of nature, a principle must capture a cause-and-effect relation about the workings of the world. One example might be something like, "people seek the greatest benefit at the lowest cost." The scientific method is essentially the process of building theories by identifying and verifying these fundamental laws of nature.

- **World View:** A world view contains fundamental and unverifiable axioms, beliefs, and values about how the world works. Religious beliefs, political philosophies, and cultural conditioning are just a few of the components that go into a person's world view. These components are largely "accepted on faith" and cannot be tested or verified directly. Without a doubt, the best example of a

world view component is the belief in God - a supreme, omniscient, omnipotent being. Another example is the presumption that human beings are basically good (as opposed to basically evil). These beliefs cannot be directly verified and must be accepted on faith.

- **Hypotheses:** Principles are the end result of a long, scrutinizing process that starts with hypotheses. A hypothesis is a reasonable proposition about the workings of the world that is inspired or implied by a theory and which may or may not be true. Hypotheses are generated from informed ignorance. Informed, because they are implied by a theory that has been previously subjected to a great deal of scrutiny, but ignorance, because no one yet knows if the hypothesis is right.
- **Verification:** This gives rise to the fifth and last part of the scientific method, verification. It seeks know if a hypothesis is right or wrong. Comparison is made with data, empirical observations drawn from the real world. The scientific method is ultimately concerned with explaining the workings of the real world. Perhaps a Greek god carries the sun across the sky. Perhaps the sun's apparent trek across the sky is caused by the rotation of the earth. Both are hypothesized relations for the perceived motion of the sun. Which is correct? The only way to know is through verification and testing to compare the hypotheses with what actually happens in the real world. Verifying hypotheses with real world data is the crucial step in transforming a hypothetical relation into a fundamental law of nature that is a principle. A hypothesis must pass the real-world-data test to become a principle. And this is the scientific method.

Other components of the scientific method:

The scientific method also includes other components required even when all the iterations of the steps above have been completed.

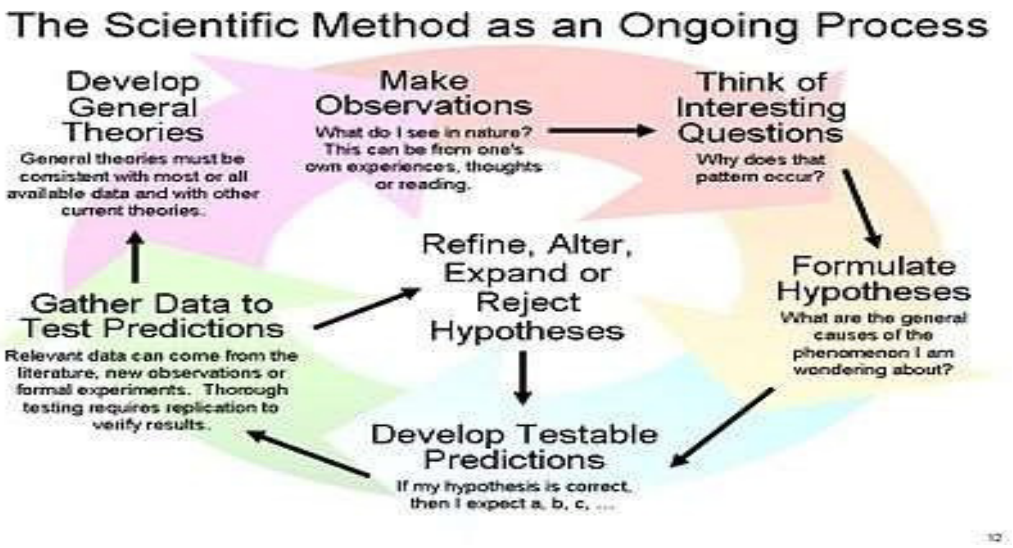
Replication: If an experiment cannot be repeated to produce the same results, this implies that the original results might have been in error. As a result, it is common for a single experiment to be performed multiple times, especially when there are uncontrolled variables or other indications of experimental error. For significant or surprising results, other scientists may also attempt to replicate the results for themselves, especially if those results would be important to their own work.

External review: The process of peer review involves evaluation of the experiment by experts, who typically give their opinions anonymously. Some journals request that the experimenter provide lists of possible peer reviewers, especially if the field is highly specialized. Peer review does not certify

correctness of the results only that, in the opinion of the reviewer, the experiments themselves were sound (based on the description supplied by the experimenter).

If the work passes peer review, which occasionally may require new experiments requested by the reviewers, it will be published in a peer-reviewed scientific journal. The specific journal that publishes the results indicates the perceived quality of the work.

 Data recording and sharing: Scientists typically are careful in recording their data, a requirement promoted by **Ludwik Fleck** (1896–1961) and others. Though not typically required, they might be requested to **supply this data** to other scientists who wish to replicate their original results (or parts of their original results), extending to the sharing of any experimental samples that may be difficult to obtain.



The steps of the scientific method are to:

- Ask a Question.(Problem)
- Do Background Research. (Observation)
- Construct a Hypothesis. (Formuate Hypotheses)
- Test Your Hypotheses. (By Doing an Experiment)
- Analyze your Data .(Analyze Your Results)
- Communicate Your Results. (Conclusion)

Thus systematic thought process is usually broken down into induction and deduction both of which are

used in the scientific method. They are:

Inductive and Deductive Method of Reasoning:

In logic, we often refer to the two broad methods of reasoning as the Deductive or Classical and Inductive approaches.

- **Chronological approach:** The Chronological approach discusses economic ideas in order of time. The economic ideas of different economists can be presented year wise and can be studied. In this approach we can find continuity in the economic ideas of different economists.
- **Conceptual approach:** This approach speaks about the evaluation of different economic concepts (ideas) and the interdependence of these concepts. Conceptual approach can also be called ideological approach.
- **Philosophical approach:** This was first adopted by Greek philosopher, Plato. In the past economics was considered as a handmade of ethics. Naturally philosophical approach was adopted by the very early writers/thinkers to discuss economic ideas.
- **Neo-Classical approach:** This approach aims at improving the classical ideas by modifying them. The Neo-classical approach was first adopted by Marshall. The Neo-classical approach believed that "Inductive and Deductive reasoning are necessary for the science of economics just as the right and left feet are necessary for walking".
- **Welfare approach:** This approach mainly aims at providing the basis for adopting policies which are likely to maximize social welfare.
- **Institutional approach:** The institutionalists questioned the validity of the classical ideas and gave more importance to psychological factors.
- **Keynesian approach:** This is a major development in modern economics and is associated with the name J.M. Keynes. His approach is new and different from the classical school. It takes into consideration the operation of business cycles that affect the entire economic policies. Keynesian approach deals with the problem of the aggregate economy as a whole.

SIGNIFICANCE/IMPORTANCE OF HISTORY OF ECONOMIC THOUGHT

- The Study of History of economic thought is important for the following reasons:
- The study of history of economic thought clearly shows that there is a certain unity in economic thought and this unity connects us with ancient times.
- The study will help students realize that economics is different from economists.
- It helps students to know that economic ideas are conditioned by time, place and circumstances.

- The study enables us to know the economic thinker responsible for the formulation of certain important economic principles and concepts.
- The study of History of economic thought will help us to understand the origin of economics as a discipline.
- The study will help students to know that economic ideas have been instrumental to the shaping of economic and political policies of different countries of the world.
- A study of the History of economic thought will help to provide a broad basis for comparison of different economic ideas. It will enable a person to have a well-balanced and reasonable judgment.

HISTORICAL VIEW OF ECONOMIC THEORIES

Ancient Economic Thought

The study of the Ancient of Economic Thought may not appear to be fascinating to modern student but there can be little doubt that for a clear understanding of economic theories and institutions in a proper sequence, such a study has more than mere historical value. It gives us an insight into the life, habit and customs of ancient communities and also provides a wider spectrum of the growth of modern economics. It shows the origin of economic thought and the factors responsible for its development. Ideas are passed from one generation to another with the necessary modification and adoptions. There for they have to be judged in their historical perspectives. The study of ancient economic thought do not provide only the necessary bridge between ancient and modern but also between accidental and oriental economic thought. Its importance lies not only in providing a continuity of ideas but also in an understanding of the interaction of these ideas in their proper relationship. It is a very important link between the old and the new. Between East and west and between ethics and economics.

Economic Thought of Hebrews:

The beginning of the science of economics and economic institutions are often traced back to the Hebrew and the Jewish time. The society discussed in the Old Testament mentioned some of the characteristics of modern capitalism and private property. The Hebrews belong to the ancient civilizations of the world. Their period dates back to 2500 B.C. It is believed by some scholars that

western civilization has its origin in Hebrew civilization. Division of labour, Market, Exchange, Money etc. were the institutions of those times. The philosophers of those time were real founders of all social theories even though their writings were in a scattered form.

The economic philosophy of the Hebrews was simple. The society in which they lived was also a simple one. Economic problems were never studied separately. Economics, Politics, Ethics and philosophy were interconnected. But the religion and Ethics were given greater importance. Economic life was controlled by priests. They gave importance to agriculture. The Hebrews had definite ideas on subjects such as interest, agriculture, property taxation etc.

ECONOMIC IDEAS OF THE HEBREWS:

Interest – The Mosaic Law prohibited interest taking or usury (High rate of interest) However the Hebrew prophets did not use the term interest. The law applied only to the Hebrews. Lending of money at interest to strangers was allowed. The Hebrews were told or directed not to collect interest on money from the poor because they borrow money mainly for the purpose consumption. The rule was modified in the time of King Solomon when charging of interest at low rates was justified. Security for loans was in the form or nature of pledge with well-defined rules for it. Thus the ideas of the Hebrews on interest were similar to those expressed by the ancient Hindu thinkers.

Just Price – Both Hebrews and Hindus exercised great care in formulating laws against false weights and measures and adulteration of articles of consumption. These were strictly prohibited. Raising price for speculative means was disapproved. There were also ceiling on the profits of the retail shopkeepers which could not exceed the limit of 162/3 percent. The export of food grains was prohibited and in times of scarcity and famine, hoarding of food grains was not permitted. Thus the concept of just price included correct weight, competitive price and reasonable rate of profit.

Labour and wages - The Hebrews recognized labour but the pride of place was given to agricultural labour. There was no wage issues as we have now. Then wages of workers were common to the knowledge of all. They did not lay down any rules for regulating the relationship between the employer and the employee. The chief regulations were concerning mercy and justice to them. Payments were made in kind.

Agriculture - The Hebrews gave greater preference to agriculture. At that time the purpose of lawgivers was to fix the people in agricultural life which was a settled one. There was the tendency to disregard trade and the mercantile community. They were encouraged to be great farmers and owners of farm lands.

Money – The Hebrews seemed to have understood the functions of money. Money was used mainly in the form of bullion. There was no question of stamped money.

Seventh and jubilee year - There was a peculiar institution of seventh and jubilee year in the history of te hebrws. It was their culture to work for six years and in the seventh year they rest after cultivating the land for six years so as to preserve the fertility of the soil. At this time slaves serving for six years are freed in th seventh year. In this year all debts should be cancelled or forgiven. The jubilee year was another peculiar institution of the Hebrews.

It was the fiftieth year. According to this provision the land bought from someone would be returned to its original owner in the 50^{th} year. In those days of the Hebrews land was a very good source or main source of wealth. They tried to prevent the acquisition of small lands from their owners by the owners of large lands. By this the Hebrews tried to or desired to prevent inequality in wealth.

Sabbath - The Sabbath was the corner stone of Hebrews economic thought. It was their weekly day of rest, relaxation, and good living. It was enjoyed by the masters and their households with their slaves and servants. According to Spiegel, "the institution of the weekend was a social invention that has no parallel in the civilization of Greek, Rome or other ancient culture.

Property – The Hebrews in those days used land as their main form of property**.** They measured wealth in lands, slaves, talents, silvers and other precious metals**.** The owner of a land is the owner of all that is above it and below it including all natural resources. According to the law of inheritance Hebrews the land goes to the first son. In the absence of a son it goes to the first daughter, In her absent to any other relations of the land owner like brother, sister or close relation.

Trade – In those days only surplus was sold in the market. The Hebrews wives were craft – women who used spin wool and flax. Commerce flourished in the reign of King Solomon. He made successful voyage to distant lands including India.

Taxes – Taxes did not exist in the Hebrew economy. Labor services were utilized for the construction of bridges, roads, and other public utility services. Customs and toll tax were also collected.

The toll tax was known as a tribute realized from every male for the maintenance of temples. The Hebrew laws helped the dependents, fatherless, and widows. The corner portion of the field and vineyards were available for the poor.

In conclusion the whole economic life of the Hebrews was very simple. Their life was dominated by the priestly class. Religion, law, ethics, philosophy and economic ideas were bound together. Their education system was very much influenced by religion and ethics. Though their economic ideas were simple and scattered they had a greater power to influence the minds of people.

Greek Economic Thought

The Greek were the first to develop an economic theory, but it appeared in the form of incidental observations, thrown off in the pursuit of a more worthy end. "It was in the Greek writers that theorizing on economic matters first explicitly emerges" according to Alexander Gray.

Though the Greek being the pioneers in many branches of Knowledge, they did not contribute much to the growth of economic ideas. There was no demonstration between politics, economic and ethics.

The ancient world was founded on a system of cast distinctions. The masters did not give due respect to odd jobs done by slaves. In the absence of freedom of choosing one's occupation there was hardly any incentive for economic activities.

According to Prof. Haney the contribution of Greek ideas in the development of modern economic thought demands no small attention.

We give credit to Plato for giving some attention to the economic aspects of social organization. Plato was the first of a long line of reformers and his student Aristotle was the first analytical economist.

PLATO (427 – 347 BC)

Plato was a Greek philosopher who was born in Athens in an aristocratic family. He was a pupil of Socrates. He taught mathematics and philosophy in the first great school of philosophers.

The academy founded by him. His famous writing, "the Republic and The Laws" are the most important sources of his economic thought. Credit goes to Plato for giving some attention to the economic aspects of social organizations.

Plato attempted to offer a systematic exposition of the principles of society and of the origin of the city state, as well as a plan for the ideal social structure". He regarded economics a branch of ethics and politics.

The Origin of the State:

Plato traced the origin of the state to economic considerations. Plato said "a state arises out of the needs of mankind. No one is self-sufficient. All of us have many wants". The state in order to supply the necessary commodities to satisfy human wants gathered together.

The partners and the helpers of this gathering is called the state. In Plato's ideal state there were two classes, the rulers and the ruled. The rulers were the Kings and the Warriors while the ruled were the artisans and the unskilled workers. The members of the ruling class must be set apart from early

childhood and they should be educated in philosophy and arts of war because they will have to protect the state against foreign attack. At age thirty they will have to pass an examination. This examination selects the future philosopher King and those who cannot pass are concerned with general administrative duties.

Plato distinguished five types of government. They are;

1.	Aristocracy	-	Rule by the best.
2.	Timocracy	-	Rule by the Soldiers

Oligarchy - Rule by a Few

The rule by the Wealthy

Democracy

Economic ideas of Plato in Greek:

Division of Labour: Plato's main contribution was his account of division of labour. By this he means the division of employment as an aid to social organization. He based the origin of the state on division of labour. Plato believed that the essential needs of mankind are food, clothing and shelter.

Therefore to Plato a city state must include a builder, a weaver, a farmer and a shoe maker or a representative of some other similar occupation.

To Plato every individual should do the job suitable for him. This enabled the production of products or commodities in large quantities. The division of labour into various trades was thus recognized as a necessary condition to economic welfare even though division of each trade into various tasks was not conceived by Plato.

Plato did not consider the necessity of a wider market for the application of the principle.

Thus Plato's idea of division of labour is different from that of Adam Smith in the following ways;

1. Adam Smith's Division of Labour is determined by the market, but Plato's division of labour determines the market**.**

2. To Adams Smith the advantages of division of labour go to only the employers, but to Plato it is beneficial to the entire society.

3. The cost of division of labour according to Plato is the difference in skill and talent. But according to Adams Smith division of labour leads to differences in skill and talent.

Size of the Population: Plato analyzed the size of the population in his state on the basis of the best results of division of labour. He provided a careful regulation of the population to maintain stability in the economy. The right number of population suggested by Plato for a state was 5040.

Only such a number provided opportunity for everyone to be familiar with all the other persons and help the economy to achieve self-sufficiency. It also helps to reap maximum productive efficiency.

If the number showed a decreasing tendency, the state should offer prizes to encourage the growth of population. But if the number exceeds 5040 new colonies must be established.

Money: Plato recognized the value of money as medium of exchange. He did not favour the idea of allowing gold and silver to be common to men. Instead Plato suggested the use of domestic coins for payment of wages and other transactions. Plato wanted the state to have a common Hellenic currency for the use of travellers, ambassadors, visitors etc.

Interest: Plato prohibited interest taking for loans in the ancient Greek. But later on he permitted interest taking as a penalty for delayed payment.

Value: Plato considered value as an inherent quality of the commodity. To him a man should not attempt to raise his price, but simply ask the value of the commodity.

Agriculture: Plato and the Greek's like the Hebrews considered agriculture as the most desirable occupation.

ARISTOTELIAN ECONOMIC VIEW

Aristotle (384-322 B.C.), The Greek philosopher who really laid the foundation of economics as a science. The most important thinker, who has ever lived, advanced a body of thought with respect to the development of the components of a market economy. He was the student of Plato. He analyzed the economic processes surrounding him and endeavored to delineate the place of economy within a society that included commercial buying and selling. He was the first analytical economist.

Aristotle provides his philosophical analysis of human ends and means. He explains that means or instruments of production as valuable because their end products are useful to people. The more useful or desirable a good is, the higher the value of the means of production is. Aristotle then goes on to derive a number of economic ideas from axiomatic concepts including the necessity of human action, the pursuit of ends by ordering and allocating scarce means, and the reality of human inequality and diversity.

Aristotle explains that actions are necessarily and fundamentally singular. For Aristotle, the individual human action of using wealth is what constitutes the economic dimension. The purpose of economic action is to use things that are necessary for life (i.e. survival) and for the Good Life (i.e. flourishing). The Good Life is the moral life of virtue through which human beings attain happiness. Aristotle taught that economics is concerned with both the household and the *polis* and that economics deals with the use of things required for the good life (virtuous). As a pragmatic or practical science, economics is aimed at the good and is fundamentally moral. Because Aristotle saw that economics was embedded in politics, an argument can be made that the study of political economy began with him. For Aristotle, the primary meaning of economics is the action of using things required for the Good Life. In addition, he also sees economics as a practical science and as a capacity that fosters habits that expedite the action.Economics is a type of prudence or practical knowledge that aids a person in properly obtaining and using those things that are necessary for living.

Given that human actions are voluntary and intentional, it follows that action requires the prior internal mental acts of deliberation and choice. Human beings seek to fulfill their perfection via action.

Observing that human nature has capacities pertaining to its dual material and spiritual character, Aristotle explains that economics is an expression of that dual character. The economic sphere is the intersection between the corporal and mental aspects of the human person.

SAINT THOMAS AQUINAS:

St. Thomas Aquinas, a medieval theologian and philosopher, is an important figure in the history of economic thought. Aquinas understands the economic ideas that economists rely on today, such as the law of supply and demand, subjective value theory, and the theory of time preference.

However, St. Thomas Aquinas had misunderstandings in his economic understanding as well, such as in his philosophy of the society and of global trade. Aquinas applies his economic understanding to determine justice in economic matters such as pricing and usury. While economists study economics as a value free science, Thomas Aquinas readily enters into a value-laden form of practical economics.

The just price is a theory of ethics in economics that attempts to set standards of fairness in transactions. With intellectual roots in ancient Greek philosophy, it was advanced by Thomas Aquinas based on an argument against usury, which in his time referred to the making of any rate of interest on loans.

Usury; is concerned with money lending and interest. He emphasized that usury is good if it increases the production of goods which are used to satisfy human needs.

MEDIEVAL ECONOMIC THOUGHT (1500 – 1750AD)

Mercantilism

Mercantilism or Commercialism**:** It is defined as a system, a policy or an initiative or strategy or an economic theory and practice, dominant in Europe from the 16th to the 18th century that promoted governmental regulation of a nation's economy for the purpose of augmenting or enhancing state power at the expense of rival national powers (other nations or countries). The enhancement was to be achieved through a number of policies and strategies that formed the frame work of the system that included government protection for native industries and commerce (protectionism), favourable balance of trade with emphasis on more exports than imports and the stockpiling of precious metals (i.e. Bullionism) among other policies and strategies. It is the economic counterpart of political absolutism. Among the researchers and writers of mercantilism was Adam Smith who according to a number of scholars coined the word mercantilism in his book, "The Wealth of Nations". Other scholars also wrote on mercantilism and explained bullionism as generally a policy aimed at regulating gold and silver movements in and out of a state. This scholars include Thomas Mann, Cantillon David Hume among others

It is an economic system which developed during the decay of the feudal system (Feudalism) to unify and increase the power and especially the monetary wealth of a nation by a strict governmental regulation of the entire national economy usually through policies designed to secure an accumulation of bullion, a favourable balance of trade, the development of agriculture and manufactures, and the establishment of foreign trading monopolies.

Mercantilism includes a national economy aimed at accumulating monetary reserves through a positive balance of trade, especially of finished goods. Historically, such policies frequently lead to war and also motivate colonial expansion.

Mercantilist theory varies in sophistication from one writer to another and has evolved over time. High tariffs, especially on manufactured goods, are an almost universal feature of mercantilist policy. Other policies have included:

- Building overseas colonies;
- Forbidding colonies to trade with other nations;
- Banning the export of gold and silver, even for payments;

- Forbidding trade to be carried in foreign ships;
- Export subsidies;
- Promoting manufacturing with research or direct subsidies;
- Limiting wages;
- Maximizing the use of domestic resources;
- Restricting domestic consumption with non-tariff barriers to trade.

It is a body of economics thought popular during the mid-16th and late 17th centuries. It held that money was wealth, accumulation of gold and silver was the key to prosperity, and one nation's gain was another's loss. Supported by economists such as Gerard de Malynes (1586-1641), Edward Misselden (1608-54), and Sir Thomas Mun (1571-1641) in the UK, Jean Baptiste Colbert (1619-83) in France ,and Antonio Serra in Italy (1570-?), it exhorted governments to maintain surplus of exports over imports through tariffs (duties), colonialism, and other such measures.

1. The fundamental aim of Mercantilism was to make a country strong. The strength of a country was tested with the help of the wealth of the country, above all, in that portion of wealth which consisted of precious metals like gold and silver. So the Mercantilists attached greater importance to bullion (gold) because it was the most durable, useful and generally acceptable form of wealth.
2. If a country has gold mines and silver mines, it can get gold and silver but if a country has no mines, it can get gold and silver through trade. The country should have a favorable balance of trade. In other words, there should be an excess of exports over imports.
3. In the Mercantilist system of thought trade was the most important occupation. Industry and commerce were ranked second in importance. Agriculture was the least important of all. The state had an important role to play in the Mercantilist system. It should come forward to exploit the natural resources of the country to increase its exports. There was regulation of economic life by the government.

Mercantilism in its simplest form is bullionism, but mercantilist writers have emphasized the circulation of money and reject hoarding. Their emphasis on monetary metals accords with current ideas regarding the money supply, such as the simulative effect of a growing money supply.

Bullionism is an economic theory that defines wealth by the amount of precious metals owned. It believed that money (gold) was the only form of wealth that was important. Countries during the 16^{th} to 18^{th} century in Europe horded gold and accumulated gold bullion in their treasuries. Bullionism is the name given to essential features of economic thought in the first mercantilist era during the 16^{th} century.

A bullionist is a person who advocates a system in which currency is directly convertible to gold or

silver.

Factors Shaping Mercantilism:

Some economic, political, religious and cultural factors were responsible for the emergence of mercantilism.

1. Economic Factors:

Towards the end of the 15th century changes were taking place in the economic life of the people. Domestic economy was giving way to an exchange economy. Agriculture was giving place to industry. Trade became very important and it changed the foundation of socio-economic set-up of the middle ages.

Trade necessitated the use of money which was available in the form of gold and silver. Along with the expansion of commerce there were improvements in transport, agriculture, population, etc., so the Mercantilist thought was the outcome of these developments.

2. Political Factors:

Towards the end of the middle ages nationalism became the strong force. Europe changed greatly due to Renaissance. As a result, there was a fundamental political change. It resulted in the emergence of strong nations like England, France, Spain, etc., Feudalism came to an end and the King became more powerful. Each nation wanted to preserve its independence and considered other nations as enemies. In order to create a strong and powerful state the Mercantilists tried to regulate the political and economic activities of the people.

3. Religious Factors:

The Reformation Movement was revolt against Roman Catholic Church. It challenged the authority of Pope. Initially the Roman Catholic Church controlled the political and economic activities of the nation. But afterthe Reformation the authority of the Pope was challenged.

4. Cultural Factors:

Culturally also Europe was undergoing a sharp change. Renaissance gave a new light of learning to the people. People were made to realise that this worldly life was more important than the heavenly life. As a result, money came to occupy an important place in human activities.

5. Scientific Factors:

In the field of science and technology great improvements and inventions were made. The discoveries of compass and printing press were of great importance, with the help of compass navigation became easier and it led to the discovery of new countries. Thus new countries opened the gates to a variety of raw

materials and markets. The invention of printing press helped the spread of new ideas and knowledge.

Mercantilism's demise was initiated by David Hume, Adam Smith (who coined the term), and other classical economist (see Classical Economics) who saw it as serving only the merchant class and argued that real wealth was to be equated with full employment through greater production of goods and services.

In more recent times, the mercantilism dogma was revived by the UK economist John Maynard Keynes (1883-1946) when he stated that a surplus in balance-of-trade stimulates demand, thus increasing the national wealth. When corporations, politicians, and unions demand control over imports through higher- duties to protect local jobs and industries, they are resorting to mercantilism.

The philosophy of mercantilism in centuries past was a problem for foreign policy, and frequently caused stress between nations. The countries that held this belief close to their heart frequently were at conflict with their neighbors.

Using Mercantilism for example:

1. Johnny, Dave and Susie are competing for resources and land in Settlers of Catan, a game where ever increased production, coupled with selfish trading behavior, rewards the players with the strongest sense of mercantilism.
2. The economy of the United States started to decline when they abandoned mercantilism in favor of cheaper outsourced labor in other countries.

Main ideas or Characteristics of Mercantilism:

1. Wealth:

The fundamental aim of the mercantilists was to make the country strong. The strength of the country was found in the wealth of the country, especially that portion of wealth which consisted of precious metals like gold and silver. Mercantilism firmly believed that gold was the basis of wealth and power. Hence the mercantilist slogan was 'more gold, more wealth and more power'. All the economic activities in the country were centred around wealth. According to Gray, "Everybody thought that his country was engaged in a race with other countries and in that race it must not be the looser".In this respect it seems that the mercantilists should have drawn inspiration from their predecessors because in ancient Greek and Roman and throughout the middle ages power was considered to be synonymous with accumulation of treasure or precious metals. Commerce was also encouraged on the same ground. To quote Columbus "Gold is a wonderful thing; whoever possesses it, is a master of everything he desires; with gold one can get souls into paradise".

This greatest importance given to precious metals may be attributed to the following reasons:

(i) In the 16th century, the only form of wealth, most useful and generally acceptable was gold and silver. Naturally the mercantilist attached more importance to gold and silver.

(ii) With the rise of absolute monarchy, taxation could be possible only if money was used as measure of value. Thus on the political side also money came to occupy greater importance.

(iii) For conducting wars money was essential. Three things were required for war—money, more money and still more money.

(iv) Mercantilists believed that trade depended on plentiful of money.

(v) Money was also needed for development of exchange economy.

(vi) Money in those days was identified with capital.

Thus the Mercantilists had a high regard for money. If we consider the circumstances of the day, Mercantilists were justified in attaching greater importance to gold. According to Keynes, "the Mercantilists understood the important role of money in the economic system. They studied the effects of an increase in the quantity of money on the price level and employment."

2. **Foreign Trade:**

The Mercantilist theory of foreign trade is known as the balance of trade theory. The aim of this theory was to get large amount of precious metals. Foreign trade was considered to be the only Source for getting gold and silver. They believed that all those nations which did not possess their own gold and silver mines could become rich after getting gold and silver from foreign countries through trade. Sir Thomas Mun the greatest representative of Mercantilist declared that, "foreign trade ought to be encouraged, for, upon it hinges the great revenue of the King, the honour of the kingdom, the noble profession of the merchant, the supply of our poor, the improvement of our lands and means of our treasure". The mercantilists insisted that the value of export should always be greater than imports. In short, they advocated a favourable balance of trade. Hence they encouraged exports and discouraged imports. "Export more, import less and collect the balance in the form of gold and silver", was the essence of this theory. Accordingly every exporter was considered to be a close friend of the state and every importer as an enemy.

However, the mercantilists theory of foreign trade has no validity in modern times. If every nation exports more, there would be an end to international trade. Further, the mercantilists did not distinguish between particular balance of trade and general balance of trade. By general balance of trade we mean

balance of the country's trade with other countries and particular country.

Further, the mercantilists were ignorant of the fact that favourable balance of trade cannot be maintained for ever because if gold comes into a country more and more, there would be inflation. Thus the mercantilist theory of foreign trade is not a correct one.

3. **Commerce and Industry:**

The mercantilists considered commerce and industry as the most important branches of the national economy. They wanted to increase the national productive efficiency by means of regulation of industry and commerce. They believed, that commerce and trade were the most productive occupation and agriculture was the least productive. Further, as they believed that manufacturing industries were more closely connected with commerce, they must receive all attention from the government. However, it should not be misunderstood that the mercantilists regarded agriculture as insignificant. They thought that agriculture did not contribute directly to the strength of the country.

4. **Population:**

Mercantilists encouraged large population for making the nation militarily strong and for increasing its productive capacity. They believed that cheap and abundant supply of labour would keep the cost of production low. This would enable a country to sell its commodity at a lower price in the international market According to Davenant, "People were the real strength of a country". The mercantilists even encouraged immigration because they would bring wealth and enrich the country.

5. **Natural Resources:**

The mercantilists wanted to utilize all the natural resources to the maximum extent so as to produce more, export more and import less. They also attached importance to agriculture in order to solve the food problem. Colonies were developed to supply the required raw materials. Further, the colonies were not allowed to export directly to foreign countries. All the commodities should be exported to the mother country only.

6. **Wages and Rent:**

The mercantilists discussed the problems of production only. So they did not give much importance to the problems of distribution, especially to wages and rent.

7. **Interest:**

No unanimity existed among the mercantilist writers on the subject of interest. Sir Thomas Mun, a famous mercantilist writer favoured interest taking for the loans on the ground that lending helped the

poor and young merchants. It also led to the employment of the savings of the widows. Thomas Mun and his followers told that the rate of interest would be high or low depending upon the industrial conditions of the country.

8. Taxation:

The views of the mercantilists on taxation were interesting because they were more scientific and ahead of their time. Broadly speaking the mercantilists favoured a multiple tax system based on the principle of "each should pay according to the benefits received from the state".

9. Theory of Value:

Regarding value, both subjective and objective approaches existed. Prior to the mercantilists, value was regarded as an intrinsic quality possessed by a commodity, it depended upon the utility of the commodity. Value was thus considered to be different from price. By the end of the mercantilist period, market value was recognised. Scarcity also determined the value of a commodity. According to the mercantilists the normal value of a commodity depended on the cost of production.

10. Factors of Production:

Mercantilists recognised three important factors of production, namely, land, labour and capital. Here we can quote Sir William Petty's saying "Labour is the father and active principle of wealth as land is the mother". The Mercantilists emphasised the cultivation of agricultural waste lands so that food production might increase and the country might become self-sufficient and imports might be reduced.

11. Commercial Regulation:

Mercantilists believed that commercial regulations were essential for maximising social welfare. Commercial laws were passed to restrict the import of food materials. But no regulation was applied to the import of raw materials because they were required for the industrial development of the country. The state supported the export industries and shipping which would secure a favourable balance of trade.

12. Role of State:

The mercantilists regarded the state as the supreme power for controlling the activities of the people. State was the master and its citizens, the servants. The mercantilists believed that state intervention was necessary to solve the problems of the society. They believed that for securing success in wars a strong nation was required. Nearly, all the mercantilist writers believed that since the total economic resources of the world were limited, the economic policy must be framed in such a manner as to increase the power of the state. As a result they suggested the policy of protection. The state policies were shaped according to this idea. Special acts were passed to encourage exports and the development of industries.

Protection was given to the industries because their main objective was to maintain a favourable balance of trade.

12. **Land Banking Schemes:**

Mercantilists ideas regarding money gave rise to the establishment of Land Banking Schemes. Land Bank Schemes were introduced by Chamberlin and Barbon.

13. **Occupation:**

Mercantilists believed that merchants were the most profitable members of the society. To them occupation was productive only if it increased wealth of a country.

Critical Estimate of Mercantilism:

Mercantilist theories and practices have been criticised by many writers. The opposition actually started towards the end of the 17th century. The storm of criticism against mercantilism was particularly strong in France. The criticism against mercantilism reached its climax towards the end of the 18th century when Adam Smith published his book "The Wealth of Nations", one fourth of which was devoted to this.

MARXISM:

It is a system of economic, social, and political philosophy based on ideas that view social change in terms of economic factors. A central tenet is that the means of production is the economic base that influences or determines the political life. Under Marxism, outdated class structures were supposed to be overthrown with force (revolution) instead of being replaced through patient modification. It held that as capitalism has succeeded feudalism, it too will be removed by a dictatorship of the workers (proletariat) called socialism, followed quickly and inevitably by a classless society which governs itself without a governing class or structure. Developed in the 19th century jointly by two lifelong German friends living in London - Karl Marx (1818- 1883) and Friedrich Engels (1820-1895) - it forms the foundation of communism.

Using Marxism in sentence or example:

Some have pointed to the fall of states like the USSR as proof that Marxism does not work and that they retained the corruption and class systems that they were meant to end.

DIFFERENCE BETWEEN CLASSICAL AND MARXIST POLITICAL ECONOMY:

Political economy is a science of the study of the interconnectedness between economics and politics in a state which is the basis for the change and development in the society. As a field of study, political

economy refers to a branch of the social sciences which deals with the production of material wealth considered as the foundation of all human society. It attempts to study the laws that govern the development of human society based on the economic relations of the people in the process of production, distribution and consumption. There are different approaches the study of political economy, they include: classical, neo-classical and Marxist approaches.

In this work, the main area of concentration is on the classical political economy and the Marxist political economy; we are also going give a clear distinction between the two concepts of classical and Marxist political economy, then we are also going to give the differences between the two concepts.

CLARIFICATION OF TERMS - CLASSICAL ECONOMICS BRIEF HISTORY OF CLASSICAL ECONOMICS

Classical economics can trace its roots to Adam Smith in 1776. In The Wealth of Nations Adam Smith presented a comprehensive analysis of economic phenomena based on the notions of free markets and actions guided by individual self interests in a laissez faire environment. This work by Smith was motivated in large part as a critique of the existing mercantilist system. Under mercantilism the ruling aristocracy directed economic activity with the primary goal of benefiting the ruling aristocracy. The mercantilist view was that the wealth of a nation was based on the wealth of the ruling aristocracy. Smith argued, quite convincingly, that the wealth of a nation was actually based on the productivity of resources, which was best achieved if the Producers, consumers, and resource owners were left to their own "selfish" actions. An efficient allocation of resources, higher living standards, and economic growth were achieved if producers sought higher profit and consumers sought greater satisfaction. Higher profit motivated producers to offer the most desired goods at the lowest expense. Greater satisfaction motivated to seek the most desired goods at the lost expense. The result is the best, more efficient use of available resources.

The classical framework developed by Adam Smith was enhanced, refined, and improved over the ensuring 150 years by a number of scholars. The basic principles were refined and applied to an assortment of topics and issues, including resource markets, international trade, economic development, and industrial activity-- to name just a few. Much of this work remains relevant to the modern study of microeconomics, often termed neoclassical economics. Economists also applied this classical framework to macroeconomic issues, especially unemployment, economic growth, and business-cycle stability. With this application a comprehensive theory of macroeconomics was developed that offered an

explanation for macroeconomic phenomena and provided recommendations for government policies.

THE CONCEPT CLASSICAL ECONOMICS

Classical economics dominated the study of economics for 150 years after it was introduced. This work not only launched the modern study of economics, it continues to provide the foundation for modern microeconomics. Classical economic principles were also adapted to macroeconomic phenomena and provided a guide for macroeconomic policy until the beginning of the Great Depression in 1929.

Classical economics fell out of favor in the 1930s largely because it did not adequately explain the occurrence of high rates of unemployment during the Great Depression. The term "classical economics" was coined in the first half of the 1800s by Karl Marx, who is considered by some as an important contributor to the development of classical economics and by others as a primary critic of this theory. The term gained new life in the early 1900s when John Maynard Keynes developed Keynesian economics as an alternative theory of macroeconomics.

Highlights of classical economics include:

One, classical economics is based on three key assumptions--flexible prices, Say's law, and savings-investment equality. Two, the theoretical structure of classical economics is based on a view that the macro economy operates in aggregate according to the same basic economic principles that guide markets and other microeconomics phenomena. Three, the economic principles of classical economics indicate that aggregated markets, especially resource markets, automatically achieve equilibrium, meaning full employment that is, full employment of resources is assured. Four, classical economics indicates that full employment is achieved and maintained without the need for government intervention and that government intervention is more likely to cause than to correct macroeconomic problems.

SHORTCOMINGS OF CLASSICAL ECONOMICS

(1) It was superficial and too shallow; it was just concern about product and did not tell us the intricate process that takes place in the concept of production. They is a link between politics and the economy, the economy determines politics

(2) They also fail to recognize the contradictions in capitalism. They see capitalism as a God ordained system that will one day be over thrown by other political system.

(3) It does not recognize the importance of labor in the political system; they consider profit as not cheating. Under the Neo-classical economy, the scholars here oppose the idea of laissez faire**.**

(4) State intervention is needed in the economy to boost economic growth, that if it continues to depend on demand and supply one day they will be a problem, those in this group are the Keynesians and neo-Keynes.

MARXIST POLITICAL ECONOMY

It is based on the theory of Karl Marx, he came to the scene to explain that there is a process of exploitation taking place during the process of production, because the classical economics did not explain the exploitation of workers for him the economic system determine the politics of any country and the economy also determines other aspect of the society, like religion, morality e.t.c the economy according to Karl Marx is the engine that drives other aspect of the society. The mode of production here refers to the organic unity of the productive forces and social relation of production. The centre piece of Marx work is an incisive analysis of the strengths and weaknesses of capitalism. Marx argued that all commodity value is determined by labour content- both the direct labour and indirect labour embodied in capital equipment. For example, the value of a shirt comes from the efforts of textile workers put together plus the value of the person who made the looms. By imputing all the values of output to labour, Marx attempted to show that profits- the part of output that is produced by workers but received by capitalists- amount to unearned income. It is the opinion of Marx that the injustice of capitalist receiving unearned income justifies transferring the ownership of factories and other means of production from capitalists to workers.

The Marxian approach is consistent with socialist worldview, which accommodates extensive state intervention and control of the economy of the nation. It is the expectation of scholars of Marxian orientation that state monopoly of the productive process will make for a better redistribution income in the society.

DIFFERENCES BETWEEN CLASSICAL ECONOMY AND MARXIST POLITICAL ECONOMY

After finish discussing about classical economy and Marxist political approach I am going to discuss about the differences between classical and Marxist political approach.

The classical political approach considers the state as a neutral judge, which is it does not allow the interference of the state in the affairs of the economy. Whatever is implemented in the economy and is good for the growth of the economy, the government is not allowed to interfere. The state is used by the ruling class to dominate the workers or the masses. That is the rich or the bourgeoisies oppress the poor masses with their wealth and influence. while the in the Marxist political economy The fundamental ideology is communism, it holds that all people are entitled to enjoy the fruits of their labour but are

prevented from doing so in a capitalist economic system, which divides society into two classes: nonowning workers and nonworking owners. Marx called the resulting situation alienation, and he said that when the workers repossessed the fruits of their labour, alienation would be overcome and class divisions would cease.

The Marxist theory of history posits class struggle as history's driving force, and it sees capitalism as the most recent and most critical historical stagemost critical because at this stage the proletariat will at last arise united. The failure of the European Revolutions of 1848 and an increasing need to elaborate on Marxist theory, whose orientation is more analytical than practical, led to adaptations such as Leninism and Maoism.

The classical economics here gives value to commodities, while in the Marxist political approach value is been given to labor because without labor, the production of goods and services cannot be possible. In classical political economy and especially Karl Marx's critique of political economy, a **commodity** is any good or service ("products" or "activities") produced by human labour and offered as a product for general sale on the market. Some other priced goods are also treated as commodities, e.g. human labor-power, works of art and natural resources, even though they may not be produced specifically for the market, or be non- reproducible goods. Classical economy sees capitalism as a God ordained system that will last forever. That is they see capitalism as a system which has come to stay permanently and can never be destroyed by any other economic system, while the Marxist political economy see capitalism as something that is not above destruction, for them capitalism will one day be destroyed and over thrown just like other economic system like feudalism which were also overthrown. Another significant difference that is inevitable in this discussion is that capitalism considers wages and salaries of labor as the true worth of labor. That is what the laborer gets as a result of work done is what is considered under capitalism, while in Marxist political economy they see salaries and wages as not the real worth of a laborer, for this system they is something else they deserve which is been held by the capitalist. Classical political economy considers the market as the basis for wealth creation, that is it is the market that gives wealth which implies that the more buyers are made available for products produced the more profit is made which leads to wealth creation because if there are no buyers for commodities produced it will lead to waste of materials and resources they by leading to loss of in profit which in turns leads to poverty, While the Marxist consider productive forces which has to do with productive forces and means of labor as the basis for creation of wealth. The classical consider political economy as economics which simply consider economics as just production, distribution and exchange, while the Marxist political

considers the relationship between the economy and other as of the society. The scholars of classical economy advocated or praise capitalism, that it promotes industrialization. Here they include Adam Smith, David Ricardo and Thomas Malthus, while the scholars in the Marxist include Fredrick Enges and Karl Marx, and this Marxist political economy is evil and exploitative.

Smith, in *The Wealth of Nations* (1776), argued that the most important characteristic of a market economy was that it permitted a rapid growth in productive abilities. Smith claimed that a growing market stimulated a greater "division of labor" (i.e., specialization of businesses and/or workers) and this, in turn, led to greater productivity. Although Smith generally said little about laborers, he did note that an increased division of labor could at some point cause harm to those whose jobs became narrower and narrower as the division of labor expanded. Smith maintained that a laissez-faire economy would naturally correct itself over time. Marx followed Smith by claiming that the most important beneficial economic consequence of capitalism was a rapid growth in productivity abilities. Marx also expanded greatly on the notion that laborers could come to harm as capitalism became more productive. Additionally, in *Theories of Surplus Value*, Marx noted, "We see the great advance made by Adam Smith beyond the Physiocrats in the analysis of surplus-value and hence of capital. In their view, it is only one definite kind of concrete labour—agricultural labour —that creates surplus-value....But to Adam Smith, it is general social labour—no matter in what use-values it manifests itself—the mere quantity of necessary labour, which creates value. Surplus-value, whether it takes the form of profit, rent, or the secondary form of interest, is nothing but a part of this labour, appropriated by the owners of the material conditions of labour in the exchange with living labour."

Differences in their mode of production

In the writings of Karl Marx and the Marxist theory of historical materialism, a mode of production (in German: Produktionsweise, meaning 'the way of producing') is a specific combination of: **Productive forces:** these include human labour power and available knowledge given the level of technology in the means of production (e.g. tools, equipment, buildings and technologies, materials, and improved land).**Social and technical relations of production:** these include the property, power, and control relations governing society's productive assets (often codified in law, cooperative work relations, and forms of association), relations between people and the objects of their work, and the relations between social classes. While the classical mode of production refers to the system of organizing production and distribution within capitalist societies. The process of capitalism, the dynamic of capital accumulation, preceded the development of the capitalist mode of production, beginning sometime in the 15th century.

The capitalist mode of production, involving the dominance of wage-based labour and private ownership of the means of production, began growing rapidly in Western Europe from the 18th century, later extending to most of the world. The capitalist mode of production is characterized by private ownership of the means of production, extraction of the surplus value created in production by a class of private owners (referred to as exploitation), wage-based labour, and distribution of both capital goods and consumer goods in a mainly market-based economy (referred to as commodity production).

CONCLUSION

The distribution of wealth and power has been a point of debate for every civilization. The economic and governmental framework of a society structures the lives of members of that society. Classical and Marxist political economic are on opposite ends of a spectrum, the one valuing a free market, the other an attempt to redress the unjust gap between the poor and the wealthy. Although the debate between the two can often be reduced to a sort of clash of classes, business versus labor, the distinction between socialism and capitalism is nuanced, and both systems demonstrate strengths and drawbacks.

Karl Marx and Keynes

In terminating our formal study of Marxism, we will examine an issue that has drawn attention over the past three decades. What is the relationship between Marxian and Keynesian economics—the latter now generally accepted by Western economists? As is often found in studying economic institutions, there are no clear-cut answers. The theories of John Maynard Keynes seem to be neither "socialism-Marxism," as one group in the United States would have us believe, nor the purely "non-Marxian manifesto" that some defenders of Keynes categorically claim. In fact, there are areas of both similarity and conflict in the two schools of thought.

Similarities:

From the beginnings of their careers, both Marx and Keynes showed heterodox tendencies with respect to accepted economic doctrines of their times. Both were appalled by the inability of accepted doctrines to explain serious problems of the real capitalist world in which they lived. Hence, each attempted to formulate an economic theory fitting the way the economy actually functions. Marx violently rejected the abstract "vulgar economics" of Ricardo, Nassau Senior, and John Stuart Mill, for he felt that these "classical economists" did little to explain the harsh reality of industrial capitalism during the period 1840-1880. Keynes felt that the bases of the later neoclassical economics, which was accepted with little question before 1929, "happen not to be those of the economic society in which we actually live, with

the result that its teaching is misleading and disastrous if we attempt to apply it to the facts of experience."The common ground between the two schools goes further. Both explicitly repudiate one special classical assumption, embodied in "Say's law of markets"—that aggregate production (supply) equals aggregate in- come (demand) and that as a result there can be no sustained lack of overall demand for the output of the entire economy, since production itself automatically creates demand.

An increase in output supposedly always generates a sufficient increase in income, purchasing power, and spending to clear the market of the extra goods. Before Marx, little heed was paid to Malthus' warnings of "ineffectual demand" and a "general overproduction glut"—Say's law had proved that to be "impossible." Marx pointedly noted the "childish" reasoning of Say's "dogma that the circulation of commodities necessarily implies an equilibrium of sales and purchases," and claimed that "if the split between the sale and the pur- chase becomes too pronounced, it asserts itself by producing— a crisis."" Keynes also built his theories on a refutation of Say's law as being "not the true law relating the aggregate demand and supply functions. . . ." Both men, in rejecting Say's law, firmly established explanations for the existence of recession and crisis in the capitalist system. Instead of the "equilibrium" situations of stable production and full employment that the neoclassicists in particular postulated after 1870, Marx and Keynes envisioned a capitalist system whose norm was instability. This might take the form of dynamic growth cycles of prosperity and crisis, raising national product over the long run but bringing about the ultimate collapse of the system through a final breakdown (Marx), or of a tendency toward irregular patterns of growth, slump, or even stagnation, depending chiefly on the level of private capital investment (Keynes). But regardless of the precise sort of instability, the mere emphasis on instability as a fact led both men to reject the optimistic view that free market capitalism naturally brings about a harmony of all economic forces and an automatic adjustment ensuring long-run stability and full employment. Neither Marxists nor Western Keynesian economists in general accept such preestablished harmony as normal under laissez-faire capitalism.

Why did rejection of Say's law carry with it such assumptions of capitalist instability? The main reason is that if aggregate demand and supply are not in balance, and if there are no automatic forces in a capitalist economy to right the balance, then there can be cases of aggregate error. One result might be market gluts, if overall demand is insufficient to take up all goods supplied. Another might be aggregate money demand in excess of production, leading to inflation. Both Marx and Keynes hold that capitalism has an inherent tendency to develop the first kind of crisis— overproduction stemming from lack of

effective demand. Marx wrote that lack of purchasing power resulted from exploitation of the working masses by capitalists, who paid laborers only subsistence wages. Keynes believed that lack of effective demand would be caused principally by the inability of private investment to absorb growing quantities of savings produced by highly developed capitalist economies.

Finally, the arena in which Marx and Keynes saw these developments taking shape was far removed from the classical microeconomics of price, value, and individual firms. They look at the capitalist system essentially as an aggregative whole, one that calls for the study of the total social product, its composition, and the forces determining it (Marx) or of the determination of national income and its components of consumption, savings, and investment (Keynes). Thus, along with the idea that capitalism would not automatically gravitate toward an "ideal" equilibrium, the modern concern with the aggregate level of economic performance, or macroeconomics, is a legacy of both schools.

Differences:

On the simplest level, the economics of the Marxian and Keynesian theories are wholly different. Marx adopted many of the accepted mid-nineteenth-century classical economics tools, such as the labor theory of value and the subsistence wage, to deduce drastically new conclusions regarding capitalism as a system. Keynes thought little of such tools. His own analysis owes much to the post-1870 neoclassical school; he wrote that "if our central controls succeed in establishing an aggregate volume of output corresponding to full employment as nearly as is practicable, the [neo] classical theory comes into its own from that point onwards. To Marx such hope would have seemed futile. However, the more important differences are broader in scope. Keynes was motivated by the desire to preserve capitalism insofar as possible, and to this end he formulated a theory that he hoped might be used to construct a reformed, "liberal" capitalism. He was a conservative who desired to extend the life of capitalism rather than to replace it by another economic system.

The contrast with Marx is striking. Marx wrote works that were passionate, bitterly critical, and destructive. His sole interest was to prove how capitalism had already fulfilled its historical mission and had consequently outlived its usefulness. For Marx, all thought of reform was either pointless or at worst reactionary, since capitalism was doomed by the progressive forces of history. In short, "Keynes wanted to apologize and conserve, while Marx wanted to criticize and

destroy." It is true that Keynesian theories regarding the weaknesses of capitalism have been used by socialists to promote their own cause. This must be regarded as somewhat ironic, because Keynes made his personal dis- taste for socialism quite clear. That he was strongly opposed to widespread nationalization of industry, to collectivism, and to the economic system of the Soviet Union was well known. Perhaps only his often-stated low opinion of Karl Marx surpassed his dislike of any alternative prospect to capitalism.

In his General Theory Keynes even relegated Marx to the "underworld" of economics, along with such minor and forgotten figures as Silvio Gesell and Major Douglas. The future predicted by Marx filled Keynes with consternation; he had no desire to live in a society dominated by "the boorish proletariat." Another difference just as great exists in the social bases of the two schools. The Keynesian system, despite its desire to preserve capitalism, is socially indifferent in its analytical structure. Its aggregate variables can be used to study economic activity in any country at all, whatever its economic institutions. In the eyes of Marxian economists, "The Keynesians tear the economic system out of its social context and treat it as though it were a machine to be sent to the repair shop, there to be overhauled by an engineer state."16 For Marx, economic systems cannot be separated from the social, cultural, political, and psychological institutions to be found with them at any given stage of history. He believed that economic theory cannot be treated apart and alone, as Keynes, the neoclassicists, or the classicists do. Marxism purports to be a complete historical system that explains all material phenomena, not only the economic.

What's the difference between Socialism, Marxism and Communism?

In classic Marxist theory, Communism is the final stage of the evolution of human socioeconomic relations. In the Marxist model, the feudal state is overthrown by the rise of the bourgeoisie, ushering in the capitalist epoch. Capitalism is then overthrown by the rise of the proletariat, which ushers in not communism, but the Socialist state. Each previous step is the necessary precondition for the next. The socialist state is thus the pre-condition for communism, and its function is to alter the state of human material conditions in such a way that communism can function. The socialist state then "withers away," leading to the end of political power in any centralized form – including nation states, as communism as envisioned by Marx is to be an international system. Equally important is the disappearance of social class distinctions, which goes hand in hand with the end of political power. When in the course of development, class distinctions have disappeared, and all production has been concentrated in the hands of a vast association of the whole nation, the public power will lose its political character. Political

power, properly so called, is merely the organized power of one class for oppressing another. These conditions all have to be met before the communist society can develop. In the most reductionist sense, socialism presupposes a strong centralized state, while communism follows once the state is no longer necessary. Marx summarized communism in this way: "an association in which the free development of each is the condition for the free development of all."

Countries which were termed communist never in fact were communist, they were socialist countries where the *goal* was achieving communism. Cuba, PRC, DPRK, USSR, Warsaw pact countries, all of these countries practise(d) socialism, with the intent of achieving communism by Dialectical materialism. The idea here is that capitalism is the thesis, socialism is the antithesis (or opposite), and communism is the synthesis (or result of having gone through the two). The State ideology was definitely communist; they practiced socialism in order to obt eventually.

Socialism is workers' ownership of the means of production, central planning of the economy and the absence of markets, and enforced equality; in practice this has invariably turned into the nightmare of single-party totalitarian dictatorship, resulting in warfare, conquest, famine, poverty, genocide, corruption, absence of the most basic human rights especially freedom of speech, and intense propaganda and revisionism. What people call today socialism is more properly termed social democracy, something completely different.

Communism is essentially anarchy, where the state doesn't exist anymore, social classes don't exist anymore, nor is there any money (socialist countries all have money). The very existence of communism is entirely theoretical and mostly pseudoscientific, more akin to an unobtainable utopia. Communism has never existed, there is no evidence that it is even possible (or desirable), and every attempt at having it, through socialism, resulted in complete disaster. If there's one which should have a definite meaning, it's Marxism, as that would be "the theories of Karl Marx". Marx tried to define "communism" and "socialism" in The Communist Manifesto. In his definition, "communism" is the end state of having key means of production owned in common (communally) without class, while "socialism" is an intermediate transition state where a social revolution (that is, of the workers, the vast majority of society) is required to get to communism. Accepting Marx's definitions and the economic and social consequences he believed would arise from them makes you a Marxist, and whether you're a socialist or a communist depends on where you are in history. Other self-described socialists and communists define the terms differently; both terms predated Marx and he has

no particular claim to defining them aside from popularity. They are all loosely-defined theories in which private property (i.e. capital) is no longer the defining force of economics. Ideally, **Socialism** is a political/economic concept wherein everything you can think of, is owned by the public. The allocation, use and control of the resources are in the hands of the public or representatives who are again chosenby the public. This system advocates equality, both social and monetary, among all individuals. **So, Socialism cuts across as a just economic system but only in theory**

Communism is a political/economic system aims for a true utopian society devoid of sexism, casteism or any other forms of oppression. Communism is seen as one of the possible solution. It is a system wherein everyone in the society receives equal share of labor and the society may attain a monetary equilibrium.

COMMUNISM VS SOCIALISM:

More often than not, in media and in conversation the concepts of Communism and Socialism are used interchangeably to refer to the essentially the same economic/political philosophy. In reality these are two different philosophies that while having some similarities also have some very stark differences. Understanding the similarities and the differences can be useful in terms of appreciation the nuances of Communism vs. Socialism in discussions or publications.

Similarities Between Communism & Socialism:

Communism and Socialism both arose in the context of the Industrial Revolution and largely as a response to a time when business owners were becoming extremely wealthy by exploiting their workers. Through different processes both philosophies looked at the current situation as being unsustainable and eventually societal pressures would result in drastic changes.

Other key similarities include:

- Each is built on the premise that individual will contribute to society based on their own ability.
- Both advocate that institutions are centralized and either controlled by government or by collectives, this effectively removes private business as a producer of goods and services.
- Government (or some form of it) plays a large role in economic investment and planning, either in a centralized form or decentralized to local government bodies.

Differences Between Communism & Socialism:

While there are certainly key similarities in the philosophy's of Communism and Socialism, there are

differences that make considering them interchangeable incorrect. The most fundamental difference is that under Communism individuals are provided for or compensated based on their needs, in effect meaning that in a true communist system you wouldn't have money and you'd simply be given what the government thinks you need in terms of food, clothing, accommodation, etc. Central to socialism is that individuals are compensated for based on their individual contribution, so people that work harder or smarter would receive more than those that don't contribute. This difference highlights a key flaw in the Communist model, where no one has any motivation to work harder or smarter as it would have no impact or benefit for them.

Other key differences include:

- Communism views all property as being public property and effectively there is no personal property or items held by individuals. Socialism rather sees individuals still having their personal property but all industrial and production capacity would be communally owned and managed by consensus or government.
- Socialism is at its core an economic philosophy, whereas Communism is economic and political in its requirement that government be the central owner and decision maker in all matters.
- Communism rejects any religion and in a true Communist state religion is effectively abolished. As Socialism is economic only in its focus, freedom of religion is allowed, though some interpretations see it as promoting secularism in its nature (even if religion is not effectively banned).
- Communism sees the complete abolishment of class distinctions as everyone is effectively treated the same. Socialism sees a diminishment here but class distinctions would still exist as there is capacity for some to achieve more wealth than others.
- Communism sees the transition from Capitalism as being a violent revolution where the existing system is effectively destroyed as the workers rise up against the middle and upper classes. Socialism rather sees a gradual transition from capitalism through legal and political processes that see everyone essentially being treated equally at birth. People would still have the ability to excel and enter the equivalent of the middle class, but their children would have to work just as hard as they did to achieve the same.

Communism and Socialism in Practice:

Contrary to what many would think there has never actually been a purely Communist state since the philosophy was created. The Soviet Union, China, Vietnam, Cuba, and North Korea are the closest examples, although none of them fully achieved (or have yet achieved) a purely communist structure. Personal property, the abolition of money, and elimination of class systems are all areas where

Communism wasn't achieved even in these near examples. These countries focused more on the central government's dominant role in all aspects of the economy, politics, and decision-making.

Socialism similarly has never been fully adopted in any country since the philosophy was created. Some countries such as Norway, Sweden, France, and Canada have many socialist policies (such as free health care and a dominant government role in many shared services) but still have very strong capitalist Structures and traditions, in

Conservative vs. Liberal:

Conservative and Liberal are two words that work their way into just about every politically focused discussion or article one comes across. These two views basically represent the opposite poles of the political spectrum. This article will highlight the key perspectives of the two and help you understand the big differences that exist when you see something labelled as Conservative vs. Liberal.

Conservative:

Politics and the Economy

- Conservative views or affiliations reflect the right-wing of the political spectrum. The common political views associated with this are support for small government, less regulation, lower taxes, and the idea that private business can address the needs of the people in a free market.
- Government should spend less and tax less and get out of the way of private business.
- Less government involvement will drive increased investment and profits from both companies and high income individuals This is generally encompasses in the oft used phrase 'trickle down economics'.
- A strong embrace of capitalist economic policies and the belief that a fair market and supply and demand will be the strongest economy.
- Conservative views are considered to oppose social issues like gay marriage, abortion, and addressing the gender pay gap.
- Also linked to a strong support of a strong military and the right for individuals to bear arms.

Social Issues

Essentially the Conservative view places far more emphasis on the individual to manage their own

affairs and not have the interference of government in doing so. The government exists to enforce law and order but should stay out of most other issues.

Liberal:

Politics and the Economy

- Liberal views or affiliations reflect the left-wing of the political spectrum. The common political views associated with this are a more involved government that actively manages things like health care and the environment, more regulation and guidance, and often higher taxes to pay for this 'larger' government.
- The government should provide more support for individuals who are less fortunate, i.e. low income individuals and the sick.
- Socialist economic policies are generally supported here in terms of shared responsibility and administration of aspects of the economy that service everyone (i.e. healthcare).

- Support for legalization of gay marriage and abortion are two issues considered to be Liberal views.
- Increased regulation of gun ownership is also considered a Liberal view.

Social Issues

The Liberal view is generally seen to involve a more active and communal social view and the need for government to ensure everyone is taken care of. The government doesn't solely exist to enforce law and order but also to support the people and help those who need it.

Closing Point

- One thing to always consider is that labeling something as Conservative or Liberal is easy to do but doesn't necessarily reflect the nuances of a government policy, an organization, or an individual.

While it is all too common for media to label something or someone as Conservative or Liberal there is often a blend of the two there.

A government bill can be passed that increases regulation (Liberal) but through process reduces taxes (Conservative). Similarly an individual can support small government (Conservative) but also believe that gay marriage and abortion should be legal (Liberal). When the Liberal vs. Conservative label is used, always apply some skepticism and consider the points above.

ASSUMPTION:

1. Belief, logical construct, or unconfirmed fact. See

assumptions for more.

2. Taking on (assuming) the duties and powers of an office, a responsibility, or someone else's obligation (such as a loan).

Example: The policeman's **assumption** that all skateboarders were "punks" was proven wrong when several of the teens collected money to help the shop owner pay for his broken benches.

Physiocracy:

From the Greek it stands for "Government of Nature" It is an economic theory developed by a group of 18th century French economists who believed that the wealth of nations was derived solely from the value of "land agriculture" or "land development" and that agricultural products should be highly priced. Their theories originated in France and were most popular during the second half of the 18th century. Physiocracy is perhaps the first well-developed theory of economics.

The movement was particularly dominated by François Quesnay (1694–1774) and Anne-Robert-Jacques Turgot (1727–1781). It immediately preceded the first modern school, classical economics, which began with the publication of Adam Smith's *The Wealth of Nations* in 1776.

The most significant contribution of the Physiocrats was their emphasis on productive work as the source of national wealth. This is in contrast to earlier schools, in particular mercantilism, which often focused on the ruler's wealth, accumulation of gold, or the balance of trade. Whereas, the Mercantilist school of economics said that value in the products of society was created at the point of sale, by the seller exchanging his products for more money than the products had "previously" been worth, the Physiocratic school of economics was the first to see labor as the sole source of value. However, for the Physiocrats, only agricultural labor created this value in the products of society. All "industrial" and non-agricultural labor was "unproductive appendages" to agricultural labor. The Physiocrats thought there was a "Natural order" that allowed human beings to live together. Men did not come together via a somewhat arbitrary "social contract". Rather, we have to discover the laws of the natural order that will allow individuals to live in society without losing significant freedoms

CLASSICAL ECONOMICS (CLASSICALIST)

Classical economics, developed in the 18th and 19th centuries, included a value theory and distribution theory. The value of a product was thought to depend on the costs involved in producing that product. The explanation of costs in Classical economics was simultaneously an explanation of distribution. A landlord received rent, workers received wages, and a capitalist tenant farmer received profits on their investment. This classic approach included the work of Adam Smith and David Ricardo. The Classical

Economist are Jeremy Bentham · Bernard Mandeville · John Ramsay McCulloch · Thomas Malthus · James Mill · John Stuart Mill · David Ricardo · Jean-Baptiste Say · Nassau William Senior · Jean Charles Léonard de Sismondi · Adam Smith · Johann Heinrich von Thünen. The fundamental principle of the **classical theory** is that the economy is self-regulating. **Classical** economists maintain that the economy is always capable of achieving the natural level of real GDP or output, which is the level of real GDP that is obtained when the economy's resources are fully employed. However, some economists gradually began emphasizing the perceived value of a good to the consumer. They proposed a theory that the value of a product was to be explained with differences in utility (usefulness) to the consumer. (In England, economists tended to conceptualize utility in keeping with the Utilitarianism of Jeremy Bentham and later of John Stuart Mill.)

The third step from political economy to economics was the introduction of marginalism and the proposition that economic actors made decisions based on margins. For example, a person decides to buy a second sandwich based on how full he or she is after the first one, a firm hires a new employee based on the expected increase in profits the employee will bring. This differs from the aggregate decision making of classical political economy in that it explains how vital goods such as water can be cheap, while luxuries can be expensive.

Classical economics is widely regarded as the first modern school of economic thought. Its major developers include Adam Smith, Jean-Baptiste Say , David Ricardo, Thomas Malthus, John Stuart Mill, David Hume, Alfred Marshal etc. The Scottish philosopher David Hume was an early exponent of what was later known as monetary economics, and was an opponent of "mercantilism". Mercanilist policy at the time, regulated trade in ways that subsidised exports so as to promote inflows of gold and silver, and restricted imports in order to discourage outflows. Hume contested the mercantilist thesis, partly on the grounds that an inflow of money would cause inflation, and partly on the grounds that nations would benefit from the international specialisation that would result from the introduction of free trade. More generally, Hume argued that all government intervention in commerce tended to obstruct economic progress.

ASSUMPTIONS OF CLASSICAL ECONOMICS:

Classical economics, especially as directed toward macroeconomics, relies on three key **assumptions** –

1. Flexible prices
2. Say's law
3. Saving-investment equality.

1. **Flexible prices:** ensure that markets adjust to equilibrium and eliminate shortages and surpluses.

The first assumption of classical economics is that prices are flexible. Price flexibility means that markets are able to adjust quickly and efficiently to equilibrium. While this assumption does not mean that every market in the economy is in equilibrium at all times, any imbalance (shortage or surplus) is short lived. Moreover, the adjust to equilibrium is accomplished automatically through the market forces of demand and supply without the need for government action. The most important macroeconomic dimension of this assumption applies to resource markets, especially labor markets. The unemployment of labor, particularly involuntary unemployment, arises if a surplus exists in labor markets. With a surplus, the quantity of labor supplied exceeds the quantity of labor demanded at the existing price of labor (wages). With flexible prices, any surplus is temporary. Wages fall to eliminate the surplus imbalance and restore equilibrium and achieve full employment. If, for example, aggregate demand in the economy takes a bit of a drop (perhaps due to fewer exports of goods to other countries), then production also declines (temporarily) and so too does the demand for labor, creating a surplus of labor and involuntarily unemployed workers. However, flexible prices means that wages decline to eliminate the surplus.

2. **Say's law:** States that supply creates its own demand and means that enough income is generated by production to purchase the resulting production.

3. The second assumption of classical economics is that the aggregate production of good and services in the economy generates enough income to exactly purchase all output. This notion commonly summarized by the phrase "supply creates its own demand" which is attributed to the Jean-Baptiste Say, a French economist who helped to popularize the work of Adam Smith in the early 1800s. Say's law was a cornerstone of classical economics, and although it was subject to intense criticism by Keynesian economists, it remains relevant in modern times and is reflected in the circular flow model. Say's law is occasionally misinterpreted as applying to a single good, that is, the production of a good is ensured to be purchased by waiting buyers. That law actually applies to aggregate, economy-wide supply and demand. A more accurate phrase is "aggregate supply creates its own aggregate demand." This interpretation means that the act of production adds to the overall pool of aggregate income, which is then used to buy a corresponding value of production, although most likely not the original production. This law, first and foremost, directed attention to the production or supply-side of the economy. That is,

focus on production and the rest of the economy will fall in line. Say's law further implied that extended periods of excess production and limited demand, the sort of thing that might cause an economic downturn, were unlikely. Economic downturns could occur, but not due to the lack of aggregate demand.

4. **The saving-investment equality:** ensures that any income leaked from consumption into saving is replaced by an equal amount of investment. The last assumption of classical economics is that saving by the household sector exactly matches investment expenditures on capital goods by the business sector. A potential problem with Say's law is that not all income generated by the production of goods is necessarily spent by the household sector on consumption demand--some income is saved.

In other words, while the production of $100 million of output generates $100 million of income, the household sector might choose to spend only $90 million, directing the remaining $10 million to saving. If so, then supply does NOT create its own demand. Supply falls $10 million short of creating enough demand. If this happens, then producers reduce production and lay off workers, which causes a drop in income and induces a decline in consumption, which then triggers further reductions in production, employment, income, and consumption in a contractionary downward spiral. However, if this $10 million of saving is matched by an equal amount of investment, then no drop off in aggregate demand occurs. Such a match between saving and investment is assured in classical economics through flexible prices. However, in this case price flexibility applies to interest rates. Should saving not match investment, then interest rates adjust to restore balance. In particular, if saving exceeds investment, then interest rates fall, which stimulates investment and curtails saving until the two are once again equal.

Although of questionable realism, these three assumptions imply that the economy would operate at full employment. These three assumptions ensure that the macroeconomy would continue to produce the quantity of aggregate output that fully employs available resources. While a few resources might be temporarily unemployed, they would be quickly reemployed as resource prices (especially wages) adjust to equilibrium balance.

Keynesian Critique of the classical Economics Assumptions:

Keynesian economics was developed by John Maynard Keynes in 1936 during the depths of the Great Depression. Keynes promoted his new theory of macroeconomics it part by showing where the existing classical economics went wrong, especially why it was unable to explain the length and severity of the Great Depression. A discussion of each of the three assumptions of classical economics provides a bit of insight.

- Flexible Prices: First up is the classical proposition that wages and prices are flexible. Keynes argued that prices are really inflexible, especially in the downward direct. This inflexibility or

rigidity of prices results because sellers, both output produces and resource owners, are unwilling or unable to accept lower prices. Inflexible prices thus prevent markets from eliminating shortages and surpluses. In particular, rigid wages allow a surplus of labor (that is, involuntary unemployment) to persist.

- Say's Law: Keynes was perhaps most critical of Say's law that supply creates its own demand. Keynes questioned whether or not supply does in fact create demand. While, in principle, revenue generated by production ultimately ends up as household income, this does not happen instantaneously. In the meantime, households can only spend the income that they actually have. If they have less income, then they spend less, less is sold, less is produced, and less revenue is generated.
- Saving-Investment Equality: The assumed equality between saving and investment was also criticized by Keynes. The lack of flexible prices might also prevent equilibrium in financial markets. Should interest rates not adjust, then saving might not match investment. Moreover, the attainment of equilibrium might actually require negative interest rates. Keynes suggested that interest rates were not the only or even most important factors affecting saving and investment. Factors such as a dismal outlook on the economy might reduce investment well below saving at any positive interest rate. A such, a disequilibrium in which saving exceeds investment means aggregate demand falls short of aggregate production and is just the sort of thing that would create a sustained depression.

These three critiques suggest why, contrary to the expectations of classical economics, high unemployment rates persisted during the Great Depression. Aggregate demand fell short of production, probably due to a lack of investment expenditures.