



M.A.ECONOMICS
SEMESTER - II

PUBLIC ECONOMICS

SUBJECT CODE : 93307

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M.A. Economics
Semester II
Public Economics
credits : 06

Module I: Government in a Market Economy:

Theorems of Welfare Economics: Implications, Lump Sum Taxes and Transfers Rationale for State Intervention: Market Failures and Externalities, Tax and Regulation, Distribution, Social Choice, Voting Rules, Arrow Impossibility Theorem

Module 2: Public Expenditure: Rationale and Evaluation: (12 Hours)

Public Goods: Pure and Local, *Optimal* provision, Lindahl's Voluntary Exchange Approach, Preference Revelation Mechanism, Private Provision of Public Goods, Merit Goods, Club Goods
Evaluation of Government Expenditure: Elements of Cost-Benefit Analysis.

Module 3: Taxation:

Basic Concepts of Tax Theory: Direct vs. Indirect Taxes, Ability to Pay, Horizontal and Vertical Equity. Commodity Taxation: Tax Rules, Optimal Commodity Taxation, Public Sector Pricing Income Taxation: Equity and Efficiency, Taxation and Labour Supply, Optimal Income Taxation (linear and non-linear). Tax Evasion: Basic Model, Auditing and Punishment.

Module 4: Reforms and Government:

Fiscal Rules: Rationale, International and Indian Experience. Decentralisation: Decentralisation Theorem. India's Federal Structure: Taxation powers, Expenditure responsibilities, Intergovernmental transfers, VAT, GST.

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MODULE I

1

GOVERNMENT IN A MARKET ECONOMY - I

Unit Structure

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Theorems of Welfare Economics
- 1.3 Lumpsum Taxes and Transfer
- 1.4 Summary
- 1.5 Questions

1.0 OBJECTIVES

After studying this module, we will come to know how important is government's intervention in market economy, also we will come to know what are the means government have to intervene in economy. Also, its impact on economy. Further this module will put light on following points, that is Market failure, Taxes, redistribution, social choice voting rules arrows impossibility theorem.

1.1 INTRODUCTION

The study of public economics has a long tradition. It developed out of the original political economy of John Stuart Mill and David Ricardo, through the public finance tradition of tax analysis into public economics, and has now returned to its roots with the development of the new political economy. From the inception of economics as a scientific discipline, public economics has always been one of its core branches. The explanation for why it has always been so central is the foundation that it provides for practical policy analysis. This has always been the motivation of public economists, even if the issues studied and the analytical methods employed have evolved over time.

In the broadest interpretation, public economics is the study of economic efficiency, distribution, and government economic policy. The subject encompasses topics as diverse as responses to market failure due to the existence of externalities, the motives for tax evasion, and the explanation of bureaucratic decision-making. In order to reach into all of these areas, public economics has developed from its initial narrow focus on the

collection and spending of government revenues to its present concern with every aspect of government interaction with the economy.

Public economics attempts to understand both how the government makes decisions and what decisions it should make. To understand how the government makes decisions, it is necessary to investigate the motives of the decision makers within government, how the decision makers are chosen, and how they are influenced by outside forces. Determining what decisions should be made involves studying the effects of the alternative policies that are available and evaluating the outcomes to which they lead. These aspects are interwoven throughout the text. By pulling them together, this book provides an accessible introduction to both of these aspects of public economics.¹

1.2 THEOREMS OF WELFARE ECONOMICS

1.2.1 Pareto-Efficiency:

Problem is that of judging among allocations with different distributional properties. What is needed is some process that can take account of the potentially diverse views of the consumers and separate efficiency from distribution. To achieve this, economists employ the concept of Pareto-efficiency. The philosophy behind this concept is to interpret efficiency as meaning that there must be no unexploited economic gains. Testing the efficiency of an allocation then involves checking whether there are any such gains available. More specifically, Pareto-efficiency judges an allocation by considering whether it is possible to undertake a reallocation of resources that can benefit at least one consumer without harming any other. If it is possible to do so, then there will exist unexploited gains. When no improving reallocation can be found, then the initial position is deemed to be Pareto-efficient. An allocation that satisfies this test can be viewed as having achieved an efficient distribution of resources. To provide a precise statement of Pareto-efficiency that applies in a competitive economy, it is first necessary to extend the idea of feasible allocations of resources. When production is included, an allocation of consumption is feasible if it can be produced given the economy's initial endowments and production technology. Given the initial endowment, ω , the consumption allocation x is feasible if there is production plan y such that

$$x = y + \omega. \quad \dots 1$$

Pareto-efficiency is then tested using the feasible allocations. A precise definition follows.

Definition:

A feasible consumption allocation $\hat{x}$ is Pareto-efficient if there does not exist an alternative feasible allocation x such that:

- i. allocation x gives all consumers at least as much utility as $\hat{x}$, and
- ii. allocation x gives at least one consumer more utility than $\hat{x}$.

These two conditions can be summarized as saying that allocation $\hat{x}$ is Pareto efficient if there is no alternative allocation (a move from $\hat{x}$ to x) that can make someone better off without making anyone worse off. It is this idea of being able to make someone better off without making someone else worse off that represents the unexploited economic gains in an inefficient position.

It should be noted even at this stage how Pareto-efficiency is defined by the negative property of being unable to find anything better than the allocation. This is somewhat different from a definition of efficiency that looks for some positive property of the allocation. Pareto-efficiency also sidesteps issues of distribution rather than confronting them. This is why it works with many consumers.

1.2.2 Theorem of Welfare Economics:

The welfare properties of the economy, which are commonly known as the Two Theorems of Welfare Economics, are the basis for claims concerning the desirability of the competitive outcome. In brief, the First Theorem states that a competitive equilibrium is Pareto-efficient and the Second Theorem that any Pareto-efficient allocation can be decentralized as a competitive equilibrium. Taken together, they have significant implications for policy and, at face value, seem to make a compelling case for the encouragement of competition. The Two Theorems are easily demonstrated for a two-consumer exchange economy by using the Edgeworth box diagram. The first step is to isolate the Pareto-efficient allocations. Consider figure 1.1 and the allocation at point a. To show that a is not a Pareto-efficient allocation, it is necessary to find an alternative allocation that gives at least one of the consumers a higher utility level and neither consumer a lower level. In this case, moving to the allocation at point b raises the utility of both consumers when compared to point a—we say in such a case that b is Pareto-preferred to a. This establishes that a is not Pareto-efficient. Although b improves on a, it is not Pareto-efficient either: the allocation at c provides higher utility for both consumers than b. The allocation at c is Pareto-efficient. Beginning at c, any change in the allocation must lower the utility of at least one of the consumers. The special property of point c is that it lies at a point of tangency between the indifference curves of the two consumers. As it is a point of tangency, moving away from it must lead to a lower indifference curve for one of the consumers if not both. Since the indifference curves are tangential, their gradients are equal, so

$$MRS_1 1,2 = MRS_2 1,2. (1.2)$$

This equality ensures that the rate at which consumer 1 will want to exchange good 1 for good 2 is equal to the rate at which consumer 2 will

want to exchange the two goods. It is this equality of the marginal valuations of the two consumers at the tangency point that results in there being no further unexploited gains and so makes c Pareto efficient. The Pareto-efficient allocation at c is not unique. There are in fact many points of tangency between the two consumers' indifference curves. A second Pareto-efficient allocation is at point d in figure 1.1. Taken together, all the Pareto-efficient allocations form a locus in the Edgeworth box that is called the contract curve. This is illustrated in figure 2.12. With this construction it is now possible to demonstrate the First Theorem. A competitive equilibrium is given by a price line through the initial endowment point, ω , that is tangential to both indifference curves at the same point. The common point of tangency results in consumer choices that lead to the equilibrium levels of demand. Such an equilibrium is indicated by point e in figure 2.12. As the equilibrium is a point of tangency of indifference curves, it must also be Pareto-efficient. For the Edgeworth box, this completes the demonstration that a competitive equilibrium is Pareto-efficient. The alternative way of seeing this result is to recall that each consumer maximizes utility at the point where their budget constraint is tangential to the highest indifference curve. Using the MRS, we can write this condition for consumer h as $MRS^h_{1,2} = p_1/p_2$. The competitive assumption is that both consumers react to the same set of prices, so it follows that

$$MRS^1_{1,2} = p_1/p_2 = MRS^2_{1,2}. \quad (1.3)$$

Comparing this condition with (2.18) provides an alternative demonstration that the competitive equilibrium is Pareto-efficient. It also shows again the role of prices in coordinating the independent decisions of different economic agents to ensure efficiency. This discussion can be summarized in the precise statement of the theorem.

First Theorem of Welfare Economics:

It has been deemed by several economists that perfect competition is an ideal market form which ensures the attainment of Pareto optimality or maximum social welfare as it fulfils all the marginal conditions required for the purpose. Essentially Pareto optimality involves efficiency in the use and allocation of resources at the disposal of a community. As seen above, if Pareto efficiency is not achieved it implies one can be made better off without anyone being made worse off. In this case there is scope of increasing social welfare by reorganisation of resources, say through a public policy. An important feature of general equilibrium reached in perfectly competitive markets leads to maximum social welfare or economic efficiency in the sense of Pareto optimality. This is known as the first or fundamental theorem of welfare economics. According to this theorem, all possibilities of increasing welfare of the individuals from exchange between them or allocation of resources in the production of different goods. In other words, the first fundamental theorem of welfare economics postulates that general competitive equilibrium is Pareto optimal. We shall show below how perfectly competitive equilibrium leads to the

first theorem of welfare economics. In what follows we shall show how equilibrium under perfect competition satisfies all the marginal conditions required for the achievement of Pareto optimum. We shall further explain what are the major obstacles in the way of maximizing social welfare or achieving Pareto optimality.

Perfect Competition and Optimal Distribution of Goods or Efficiency in Exchange:

The condition for Pareto optimality with regard to the distribution of goods among consumers requires that the marginal rate of substitution (MRS) between any two goods, say “X” and “Y”, must be the same for any pair of consumers. Let “A” and “B” be the two consumers between whom two goods “X” and Y are to be distributed. Under perfect competition prices of all goods are given and same for every consumer. It is also assumed that consumers try to maximize their satisfaction subject to their budget constraint. Now, given the prices of two goods, consumer “A” will maximize his satisfaction when he is buying the two goods “X” and Y in such amounts that:

$$MRS_{xy}^A = P_x/P_y \dots\dots\dots 1$$

Likewise, the consumer B will also be in equilibrium (maximise his satisfaction) when he is purchasing and consuming the two goods “X” and “Y” in such amounts that:

$$MRS_{xy}^B = P_x/P_y \dots\dots\dots 2$$

Since this is essential condition of perfect competition that prices of goods are the same or uniform for all consumers, the price ratio of the two goods P_x/P_y in equations (1) and (2) above will be the same for consumers “A” and “B”. It, therefore, follows from equations (1) and (2) above that under conditions of perfect competition marginal rate of substitution between two goods ‘X’ and ‘Y’ will be equal for the two consumers. That is,

$$MRS_{xy}^A = P_x/P_y = MRS_{xy}^B = P_x/P_y$$

This result will hold good between any pair of goods for any pair of consumers.

Perfect Competition and Optimal Allocation of Factors:

The second marginal condition for Pareto optimality relates to the optimal allocation of factors among the production of various goods. This condition requires that for the optimal allocation of factors marginal rate of technical substitution (MRTS) between any two factors, say labour and capital of any pair of firms must be the same in the production of any pair of products. This condition is also satisfied by perfect competition. For a firm working under perfect competition prices of factors it employs are given and constant and it is in equilibrium (that is, minimizes cost for a given level of output) at the combination of factors where the given isoquant is tangent to an is o-cost line. As is well known, the slope of the

isoquant represents marginal rate of technical substitution between the two factors and the slope of the is o-cost line measures the ratio of the prices of two factors. Thus, under perfect competition a cost minimizing firm producing good “X” will equate MRTS between labour and capital with the price ratio of these two factors. Thus, under perfect competition

$$MRS_{LK}^X = w/r \dots\dots\dots (1)$$

where ‘w’ and ‘r’ are the prices of labour and capital respectively and $MRTS_{LK}^X$ is the marginal ate of technical substitution between labour and capital in the production of good ‘X’. Similarly. firm B producing good Y and working under perfect competition will also equate his marginal ate of technical substitution between the two factors with their price ratios. Thus

$$MPS_{LK}^Y = w/r \dots\dots\dots (2)$$

Since under perfect competition, prices of factors are the same for all the firms, each firm will adjust the use of factors in such a way it’s his marginal rate of technical substitution (MRTS) between labour and capital in the production of goods is equal to the same factor price ratio in other words w/r will be the same for all of them and to this $MRTS_{LK}$ of firms producing different commodities will be made equal. It therefore follows from (1) and (2) above that under perfect competition

$$MRS_{LK}^X = MPS_{LK}^Y$$

We thus see that perfect competition ensures optimal allocation of resources as between different firms using these resources for production of commodities.

Perfect competition and General Economic efficiency:

The most important condition for the attainment of Pareto optimum is one which refers to the optimum direction or composition of production. In other words, this condition requires how much amounts of different goods should be produced and resources allocated accordingly. This refers to the general condition for optimum allocation of resources which has also been called the condition for General Economic Efficiency. This condition states that marginal rate of substitution between any two commodities for any consumer should be the same as the marginal rate of transformation for the community between these two commodities Under conditions of perfect competition, each firm to be in equilibrium produces so much output of a commodity that its marginal cost is equal to the price of the commodity. Thus, for firms in perfect competition, $MC_x = P_x$, $MC_y = P_y$, where MC_x , and MC_y , are marginal costs of production of commodities ‘X’ and ‘Y’ respectively and ‘ P_x ’, and ‘ P_y ’, are prices of commodities ‘X’ and ‘Y’. Therefore, it follows that firms in perfect competition will be in equilibrium when they are producing commodities in such quantities that

$$MC_x/MC_y = P_x/P_y \dots\dots\dots (1)$$

The ratio of marginal costs of two commodities represents the marginal rate of two commodities represents the marginal rate of transformation

between them. Therefore, for each firm working under perfect competition.

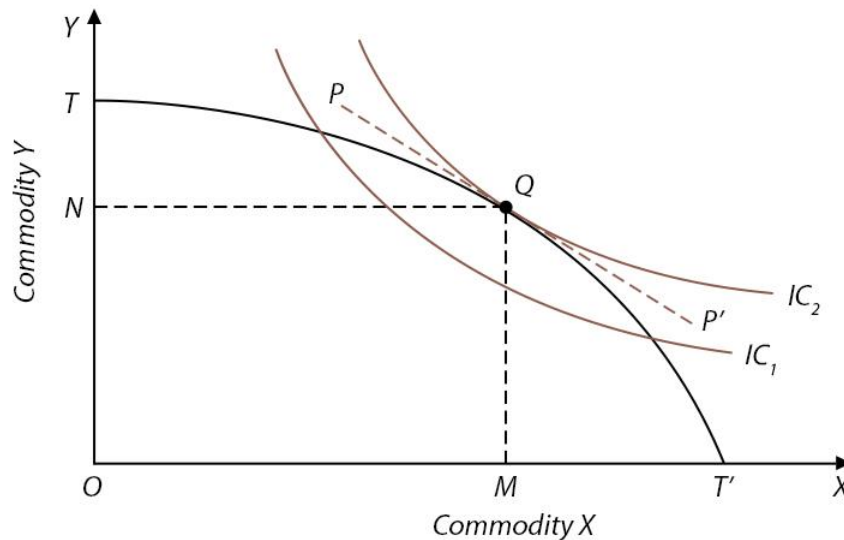
$$MRT_{xy} = MC_x/MC_y = P_x/P_y \dots \dots \dots (2)$$

When there prevails perfect competition on the buying side, each consumer maximises his satisfaction and is in equilibrium at the point where the given budget line is tangent to his Indifference curve. In other words, each consumer is in equilibrium when:

$$MRS_{xy} = P_x/P_y,$$

Since, under perfect competition, the ratio of prices of two commodities P_x/P_y is the same for a consumer and a producer, it follows from (1) and (2) above that $MRS_{xy} = MRT_{xy}$

Figure No. 1.1
Pareto-Optimal composition of
output under perfect competition



Likewise, this will hold good for any other pair of commodities. Thus, perfect competition satisfies the marginal condition required for the Pareto optimal composition or direction of production. This is shown In Figure 1.1 where at the tangency point Q between Indifference curve IC_2 , reflecting the preferences of the consumer and the transformation curve TT' representing the production possibilities of the community, the general equilibrium occurs under perfect competition. At this equilibrium point Q, OM quantity of product X and ON quantity of product Y are being produced and the consumer is at its highest possible indifference curve IC_2 , and $MRS_{xy} = MRT_{xy}$ any deviation from this product mix (OM of X and ON of Y) will lower the welfare of consumers. Thus, the competitive equilibrium at point Q represents Pareto optimal direction of production.

Perfect Competition and Optimum Degree of Specialisation:

Pareto optimality with regard to the degree of specialisation in production by various firms requires that the marginal rate of transformation (MRT) between any two products be the same for any two firms that produce the two products. Let us assume two firms A and B producing the two products 'X' and 'Y'. The Pareto optimum with regard to the degree of specialisation of products requires that:

$$MRT_{xy}^A = MRT_{xy}^B$$

where MRT represents marginal rate of transformation between products X and Y.

Now, a firm working under perfect competition and producing two products will equalise marginal rate of transformation between X and Y (MRT_{xy}) with the price ratio of the two products so as to maximise its profits. A multi-product firm will be in equilibrium where a given transformation curve is tangent to an iso-revenue line. The tangency of the iso-revenue curve with the transformation curve implies the equality of marginal rate of transformation between the two products with the price ratio of the two products. Since under perfect competition prices of all products are the same or uniform for all firms, the firms are merely price takers having no individual influence over the prices of the products. As a result, all firms under perfect competition will equate their marginal rate of transformation between the two products with the same ratio of prices of the products. This will render the marginal rate of transformation between the two products equal for all firms. In terms of notations used above, under perfect competition the firm A will be in equilibrium when:

$$MRT_{xy}^A = P_x/P_y$$

Similarly, under perfect competition the firm B will be in equilibrium when.

$$MRT_{xy}^B = P_x/P_y$$

Since product price ratio P_x/P_y is the same for both the firms, it follows that under perfect competition.

$$MRT_{xy}^A = MRT_{xy}^B$$

The fulfilment of this condition regarding optimal degree of specialisation under perfect competition can also be shown in another way. As is quite well known, a firm under perfect competition equates price with marginal cost of production of a commodity in order to maximise its profits. Since marginal cost of every product produced by a firm under perfect competition will be equalised with its price, the ratio of marginal costs of two products produced by the firm will be equal to the ratio of prices of two products. Thus, the firm A will be in equilibrium under perfect competition with:

$$MC_x^A / MC_y^A = P_x / P_y$$

Likewise, the firm B will be in equilibrium when

$$MC_x^B / MC_y^B = P_x / P_y$$

Since prices of two products, P_x , and P_y are the same for all the firms working under perfect competition, the price ratio of the products, P_x / P_y will also be the same. It therefore follows from above that:

$$MC_x^A / MC_x^B = MC_x^A / MC_x^B$$

Now, the ratio of marginal costs of two products MC_x / MC_y represents the marginal rate of transformation, between the two products (MRT_{xy}). Hence the marginal rate of transformation between the two products ($MRTS_{xy}$) will be the same for the two firms thus.

$$MRT_{xy}^A = MRT_{xy}^B$$

Perfect Competition and Optimum Factor-Product Relationship:

The fourth condition required for the achievement of Pareto optimality states that marginal rate of transformation between any factor and any commodity must be the same for any pair of firms using the factor and producing a product. Marginal rate of transformation between a factor and a commodity implies marginal physical product (MP) of the factor in the production of that commodity.

Therefore, this condition requires that marginal physical product of a factor must be the same for all firms using the factor and producing a commodity. This condition is also satisfied under conditions of perfect competition. To be in equilibrium a firm under perfect competition in the factor market will employ such an amount of the factor that equates price of the factor with the value of the marginal product (VMP) of the factor. Now, value of the marginal product of the factor is marginal physical product of the factor (MPP) multiplied by the price of the commodity (P_x). Let us take labour as an example of a factor of production and w as the price of labour, that is, its wage rate. Thus,

$$VMP \text{ of a factor} = MP_L \cdot P_x$$

It follows from above that under perfect competition for any firm A to be in equilibrium,

$$w = VMP_L^A = MP_L^A \cdot P_x$$

$$w/P_x = MP_L^A \dots\dots\dots(1)$$

Likewise for another firm B to be in equilibrium

$$w = VMP_L^B = MP_L^B \cdot P_x$$

$$w/P_x = MP_L^B \dots\dots\dots(2)$$

Since under perfect competition price of factor 'w' as well as the price of product (P_x) is the same for all firms, it follows from (1) and (2) above that

$$MP_L^A = MP_L^B$$

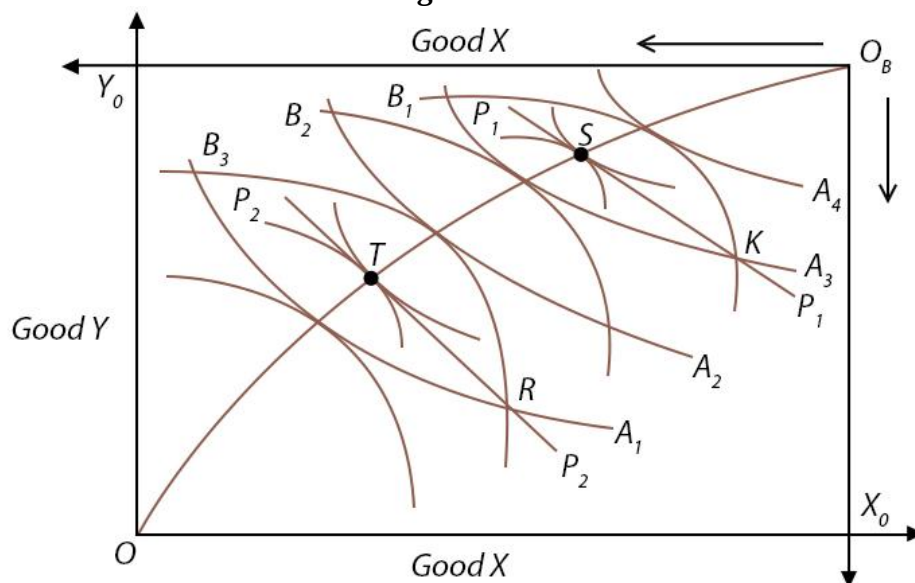
That is marginal physical products of a factor is the same in both firms A and B producing a commodity. This will hold good for any pair of firms working under perfect competition.

Second theorem of welfare Economics:

According to above explanation perfectly competitive general equilibrium leads to the first or fundamental theorem of welfare economics, that is, competitive equilibrium is Pareto optimum. There is also a second theorem of welfare economics according to which for every Pareto optimal situation there is a competitive equilibrium, given the initial income distribution or factor endowment. Take for instance the case of Pareto optimality of exchange. When the Indifference curves, are convex to the origin, every efficient allocation (i.e., Pareto optimal distribution) on the contract curve for exchange is a competitive equilibrium for some given initial distribution of goods or allocation of factors (1e income) among individuals. This Implies that whatever the initial distribution of Income In a society the corresponding Pareto optimality or economic efficiency with regard to exchange and distribution of goods among the Individuals can be reached through perfectly competitive equilibrium. Consider Figure next where allocation of goods, between two individuals is shown. If initial distribution of goods between the two goods is given by point K, then perfect competition can lead to the determination of price ratio of goods as shown by price line P_1, P_1 , so that through exchange the two individuals can reach at point S which depicts higher level of welfare for both and as it lies at the contract curve, it is Pareto optimal. Similarly, If Initial distribution of goods (i.e. real income) is given by point R, then perfect competition can determine price ratio of the two goods as given by price line P_2, P_2 , so that through exchange the two individuals can reach point

Ton the contract curve which is Pareto optimal.

Fig No. 1.2



(Ref: Dr. H L Ahuja, Advanced Economic theory, 19th Revised edition.)

1.3 LUMP SUM TAXES AND TRANSFER

The discussion of the Second Theorem noted that it does not describe the mechanism through which the decentralization is achieved. It is instead implicit in the statement of the theorem that the consumers are given sufficient income to purchase the consumption plans forming the Pareto-efficient allocation. Any practical value of the Second Theorem depends on the government being able to allocate the required income levels. The way in which the theorem sees this as being done is by making what are called lump-sum transfers between consumers.

A transfer is defined as lump sum if no change in a consumer's behaviour can affect the size of the transfer. For example, a consumer choosing to work less hard or reducing the consumption of a commodity must not be able to affect the size of the transfer. This differentiates a lump-sum transfer from other taxes, such as income or commodity taxes, for which changes in behaviour do affect the value of the tax payment. Lumpsum transfers have a very special role in the theoretical analysis of public economics because, as we will show, they are the idealized redistributive instrument.

The lump-sum transfers envisaged by the Second Theorem involve quantities of endowments and shares being transferred among consumers to ensure the necessary income levels. Some consumers would gain from the transfers; others would lose. Although the value of the transfer cannot be changed, lump-sum transfers do affect consumers' behaviour because their incomes are either reduced or increased by the transfers—the transfers have an income effect but do not lead to a substitution effect between commodities. Without recourse to such transfers, the decentralization of the selected allocation would not be possible. The illustration of the Second Theorem in an exchange economy makes clear the role and nature of lump-sum transfers. The initial endowment point is denoted ω , and this is the starting point for the economy. If we assume that the Pareto-efficient allocation at point e is to be decentralized, then the income levels have to be modified to achieve the new budget constraint. At the initial point the income level of h is $p\omega^h$ when evaluated at the equilibrium prices $\hat{p}$. The value of the transfer to consumer h that is necessary to achieve the new budget constraint is $M^h - \hat{p}\omega^h = \hat{p}x^h - \hat{p}\omega^h$. One way of ensuring this is to transfer a quantity $x_1^h - \omega_1^h$ of good 1 from consumer 1 to consumer 2. But any transfer of commodities with the same value would work equally well.

There is a problem, though, if we attempt to interpret the model this literally. For most people, income is earned almost entirely from the sale of labour so that their endowment is simply lifetime labour supply. This makes it impossible to transfer the endowment since one person's labour cannot be given to another. Responding to such difficulties leads to the reformulation of lump-sum transfers in terms of lump-sum taxes. Suppose that the two consumers both sell their entire endowments at prices $\hat{p}$. This

generates incomes $p\omega^1$ and $p\omega^2$ for the two consumers. Now make consumer 1 pay a tax of amount $T_1 = \hat{p} \times x_1^1$ and give this tax revenue to consumer 2. Consumer 2 therefore pays a negative tax (or, in simpler terms, receives a subsidy) of $T_2 = -\hat{p} \times x_1^1 = -T_1$. The pair of taxes T_1, T_2 moves the budget constraint in exactly the same way as the lump-sum transfer of endowment. The pair of taxes and the transfer of endowment are therefore economically equivalent and have the same effect on the economy. The taxes are also lump sum because they are determined without reference to either consumer's behaviour and their values cannot be affected by any change in behaviour.

Lump-sum taxes have a central role in public economics due to their success in achieving distributional objectives. It should be clear from the discussion above that the economy's total endowment is not reduced by the application of the lump-sum taxes. This point applies to lump-sum taxes in general. As households cannot affect the level of the tax by changing their behaviour, lump-sum taxes do not lead to any distortions in choice. There are also no resources lost due to the imposition of lump-sum taxes, so redistribution is achieved with no efficiency cost. In short, if they can be employed in the manner described they are the perfect taxes.

1.5 SUMMERY

Pareto-efficiency judges an allocation by considering whether it is possible to undertake a reallocation of resources that can benefit at least one consumer without harming any other. If it is possible to do so, then there will exist unexploited gains. The welfare properties of the economy, which are commonly known as the Two Theorems of Welfare Economics, are the basis for claims concerning the desirability of the competitive outcome. An important feature of general equilibrium reached in perfectly competitive markets leads to maximum social welfare or economic efficiency in the sense of Pareto optimality. For every Pareto optimal situation there is a competitive equilibrium, given the initial income distribution or factor endowment. The discussion of the Second Theorem noted that it does not describe the mechanism through which the decentralization is achieved. It is instead implicit in the statement of the theorem that the consumers are given sufficient income to purchase the consumption plans forming the Pareto-efficient allocation. Any practical value of the Second Theorem depends on the government being able to allocate the required income levels

1.6 QUESTIONS

1. What is Pareto-Efficiency?? Discuss in detail.
2. Explain Perfect competition and General Economic efficiency.
3. Explain Second theorem of welfare.

GOVERNMENT IN A MARKET ECONOMY – II

Unit Structure

- 2.0 Objectives
- 2.1 Introduction
- 2.2 Rationale for State Intervention
- 2.3 Market Failure and Externalities
- 2.4 Tax
- 2.5 Distribution
- 2.6 Social Choice, Voting Rules, Arrow's impossibility Theorem
- 2.7 Summary
- 2.8 Questions
- 2.9 References

2.0 OBJECTIVES

1. Student must understand need and importance of state intervention in economy.
2. To study what is market failure and concept of externality.
3. To understand taxation and distribution of resources.
4. Understanding, in democracy how individual make their choices regarding welfare.

2.1 INTRODUCTION

This unit is framed according to the need of knowledge students should possess after completion of their masters in economics. After studying this unit student will have enough knowledge about wide area of economics in this student will be able to understand need and importance of government intervention in market economy. Also, we will be able to understand concept of market failure how government intervention can cure it. Importantly how society takes decision about welfare and what are the obstacles in it. This unit will clear all the points maintained above.

2.2 RATIONALE FOR STATE INTERVENTION

The standard justification of state intervention takes as its starting point the behaviour of the economy in the absence of the government, that is, in

the hypothetical situation of a free market economy. From the basic theorems of welfare economics, if this economy is perfectly competitive and there is a full set of markets, then, assuming that an equilibrium exists, it is Pareto-efficient; i.e., no one can be made better off without someone else being worse off. If it is assumed that social decisions should be based on individual welfare, and that individuals are likely to know better than the government what makes them happy, this creates a presumption that state intervention is not necessary on efficiency grounds. For some, this efficiency argument for decentralization understates the full value of the free market, since they value the right to choose in itself; others believe that there is a relationship between the form of economic organization and political control.

The proposition about the efficiency of competitive equilibrium is used as a reference point to explain the roles of government activity. The first of these is that Pareto efficiency does not ensure that the distribution that emerges from the competitive process is in accord with the prevailing concepts of equity (whatever these may be). One of the primary activities of the government is indeed redistribution. Ideally, this would be achieved through measures that did not destroy the efficiency properties, and much of welfare economics is based on the assumption that no distortionary “lump-sum” taxes and transfers can be carried out. For reasons discussed later, such instruments are not typically available in a sufficiently flexible form, and the government has to employ income and wealth taxes, social security benefits related to unemployment or wages, etc.

Second, the economy may not be perfectly competitive. It is the expressed object of antitrust policy to ensure that firms do not collude or that individual firms do not obtain a sufficiently large share of any market that they can, by restricting their output, increase the price to consumers. But there are some cases where it would be inefficient to have a large number of competing firms. It is widely recognized that in many production processes there is an initial stage of increasing returns to scale. If the point of minimum average costs occurs at so high an output that a single firm would have a significant portion of the market, then, although it might be feasible to divide the firm up into competing units, this would increase costs. Notable examples of such “natural monopolies” are telephones and electricity. In the absence of government intervention, these industries would be likely to be controlled by a few firms, with consequent monopoly power. Accordingly, governments may control such industries directly like United Kingdom or regulate them like United States.

One central set of economic activities in which the assumption of increasing returns to scale seems to be particularly important is research and development. There may be competition—in the sense of free entry—in these activities, yet a firm that discovers a new product or a new process has a significant effect on the market, even if only temporarily. There is not the perfect competition of the basic theorems of welfare economics,

and the resource allocation generated by the market is not in general Pareto-efficient.

Even if the economy were competitive, it may not ensure a Pareto-efficient allocation of resources. The theorem requires that there be a full set of markets for all relevant dates in the future and for all risks. Typically, a full set of futures and insurance markets does not in fact exist. There may be partial substitutes, for example the stock market, but it can be shown that the allocation remains inefficient in many circumstances, and indeed opening additional markets may worsen the allocation (Newbery and Stiglitz, 1979). Similarly, the theorem presupposes perfect information, or that the information that is available is not affected by the actions of individuals. The analysis of markets with imperfect information has only recently begun, but it is already apparent that the welfare economics theorems need to be modified significantly (Stiglitz, 1980). The presence of imperfect information is likely to confer monopoly power. Where competition is maintained, an equilibrium may not exist, and when it does exist it may not be Pareto-efficient.

Furthermore, the basic theorem requires that the full equilibrium should be attained. Yet, because of incomplete markets or imperfect information or other reasons, capitalist economies have frequently been characterized by under-utilization of resources (of a kind that creates a strong presumption of inefficiency). Most dramatic of these failures of the market economy are the fluctuations that periodically lead to substantial unemployment. It is now accepted as a responsibility of the government to ensure a low level of unemployment (although views as to what is acceptably “small” may change over time). More generally, the fact that the market economy can lead to such massive under-utilization of resources calls in question the appropriateness of the competitive equilibrium model. It is not obvious that—as some economists have suggested—once the problem of unemployment has been “solved”, the classical model of the market economy, with its welfare implications, becomes applicable. It is more reasonable to suppose that the problem of unemployment is only the worst symptom of the failure of the market. There are indeed many other examples that suggest the limited applicability of the competitive equilibrium model: persistent shortage of particular skills, balance of payments disequilibria, regional problems, unanticipated inflation, etc. Even if the economy is well described by the competitive equilibrium model, the outcome may not be efficient because of externalities. There are innumerable examples where the actions of an individual or firm affect others directly (not through the price system). Because economic agents take into account only the direct effects upon themselves, not the effect on others, the decisions they make are likely not to be “efficient”. Air and water pollution are perhaps the most notable examples, and there has been much controversy about the appropriate method of handling these, e.g., regulation, taxes, or subsidies.

A particular category of commodities for which the market will not necessarily ensure the correct supply are public goods, of which defence and basic research are conventional examples. These have the characteristic that the consumption of these commodities by one individual need not detract from that available to others. Some of these goods are specific to particular locations (e.g., the transmission of radio or television), and are referred to as local public goods.

Finally, there are what Musgrave said ‘merit wants.’ This is a category of goods where the state makes a judgement that some goods are “bad” and some are “good” or and attempts to encourage good like education and discourage the bad like alcohol. This is different from the arguments concerning externalities and public goods, in that with merit wants, the “public” judgement differs from the private evaluation, rejecting a purely individualistic view of society. This may lead to public spending on merit goods or extra taxes on “demerit” goods. The ethical basis of such judgements is a question of some dispute, and some writers have tried to bring such objectives within the framework of individualistic judgements, by extending the latter to include views about the nature of society. Thus, a person may have private interest in reducing the tax on tobacco, because cigarettes are important in his private utility function, but in his social judgements reduction in cigarette consumption would be desirable.

It is clear that, even if we accept the basic theorem of efficiency of the competitive economy as a valuable reference point, following are some other important reasons for government intervention: (1) distribution, (2) failure of perfect competition, (3) absence of futures and insurance markets, (4) failure to attain full equilibrium, (5) externalities, (6) public goods, and (7) merit wants.

2.2 MARKET FAILURE AND EXTERNALITIES

2.3.1 Externalities:

An externality represents a connection between different economic agents which are outside the price system of the economy. As the level of externality generated is not controlled directly by price, the standard efficiency theorems on market equilibrium cannot be applied. The market failure that can result raises a potential role for correction through policy intervention. Externalities and their control are a subject of increasing practical importance. The greenhouse effect is one of the most significant examples of the consequences of an externality but there are any number of others, from purely local environmental issues to similarly global ones. Although these may not appear at first sight to be economic problems, many of the policy responses to their existence have been based on the economic theory of externalities. The purpose of this chapter is to demonstrate the consequences of the existence of externalities and to the review policy responses that have been suggested. In particular, it will be shown how the unregulated economy generally fails to reach an efficient outcome and to what degree this can be corrected using standard tax

instruments. The chapter begins with a discussion of alternative definitions of an externality which differ in whether they focus on effects or consequences. Adopting an effect-based definition, it is then shown how the market generally fails to achieve efficiency. This lack of efficiency is contrasted to the claim of the Coase theorem that efficiency will be eliminated by trade. An emphasis is placed on the role of missing markets and inefficiency in bargaining with incomplete information. The design of the optimal set of correctives, or Pigouvian, taxes is then addressed under alternative assumptions about the feasible degree of differentiation between different households and firms. The chapter is completed by contrasting the use of taxes with direct control through tradable licences and value of internalisation.

Although the nature of an externality as an effect inflicted by one agent upon another may seem very clear at an intuitive level, once a formalisation is attempted a number of issues arise that need to be resolved. Of most importance is the question of whether the existence of an externality should be judged by its effects or by its consequences. Since both approaches have some merit, but can lead to different classifications, there is no universally agreed definition of an externality. This section discusses two alternative definitions and describes the representation of externalities adopted in the following analysis.

Definitions In the literature there have been a number of alternative definitions of an externality and several attempts at providing classifications of various types of externalities; a survey is presented in Baumol and Oates in year 1988. There are two major definitions of externalities, the first defines an externality by its effects and the second defines by the reason for its existence and its consequences.

The first definition of externalities: An externality is present whenever some economic agent's welfare (utility or profit) includes real variables whose values are chosen by others without particular attention to the effect upon the welfare of the other agents they affect. This is a very broad definition but does have the advantage of allowing an externality to be recognised from its effects. The definition also implicitly distinguishes between two broad categories of externality. A production externality is said to exist when the effect of the externality is upon a profit relationship and a consumption externality is present whenever a utility level is affected. Clearly, an externality can be both consumption and a production externality simultaneously. For a household, an externality can affect either the consumption set or the utility function. In either case, final welfare will be affected. Similarly, for a firm, an externality may determine the structure of the production set or it may enter the profit function directly. The difficulty with this definition is its dependence upon the institutional context in which it is placed. The following example of Heller and Starret (1976) illustrates this point. In a barter economy with two households, the utility of each household is dependent upon the quantity that the other household is willing to give up in exchange. From

the definition above, this must clearly count as an externality although such a classification seems inappropriate. If the institutional setting is altered by the introduction of competitive markets, then the externality is removed.

Based on this reasoning, Heller and Starret in year 1976 provide an alternative definition of externalities that relates to existence of markets and the consequences of the externality: An externality is present whenever there is an insufficient incentive for a potential market to be created for some good and the nonexistence of this market leads to a non-Pareto optimal equilibrium.

Although the conditions of the second definition are stronger than those of the first so that, for a given institutional framework, the externalities it identifies will be a subset of those identified by the first, in most cases the two definitions will delineate precisely the same set of effects as externalities. On this basis, the first definition is adopted as the determinant of what constitutes an externality. The second definition is still important, however, due to it directing attention to the question of why some markets exist and some do not.

2.3.2 Market Failure:

Market Failure means do not act in a manner which it tends to encourage competition and bring about efficiency. Market economy provides private goods efficiently. The markets are characterized by imperfect competition, production is subject to decreasing cost. Consumers are forced with advertisement. So, it said that market mechanism is not considered to be appropriate for the provision of social / public goods.

It is also said that the market is not in a position to solve the complete economic problem. Some time it never functions efficiently due to externalities. Here externalities mean it is a situation where consumption are shared and not be limited to particular consumer.

The market functions appropriately if there is exclusion principle works. At the same time market also responds to the effective demands of consumer. There are certain problems like unemployment, inflation and economic can be solved through market only. Here, market failure occurs in case of provision of public good, thus, when market failure occurs budgetary provision is required if consumption is non-rival and exclusion is inappropriate.

•Market Failure in case of non-rival Consumption:

Non-rival consumption is the best feature associated with the public good. In other words, non-rival consumption means equal number of benefits are offered to all i.e., consumption benefit of public park derived by an individual 'X' do not affect the consumption benefit of other individuals in the society. Here marginal cost is zero for use public park. However, though the marginal cost is zero, the cost of providing public park itself is

not free of cost. Thus, market fail in covering of the cost of public goods / social goods and this could be covered by political procedure of the budget.

• **Market Failure and Non-Excludability:**

As we know market fails because of rival consumption and where exclusion principle does not work. This could be explained with the following example. Considering travelling a crowded Road during peak hours. In this situation, the use of the existing road is conspicuously rival and exclusion becomes highly essential and effective. This example shows a situation where exclusion becomes inevitable but is not feasible due to market failure.

• **Collectivism and Market Failure:**

The features of non-rival consumption and non-excludability need not work hand in hand quite frequently work in unity. It is observed that the goods can be classified into four parts depending up their consumption and excludability features as below.

1. Rival- Exclusion Feasible: The private good case tells us the combination of consumption with excludability provision of these goods through market is definitely both feasible and efficient. In rest of the case market failure occur.

2. Rival- Exclusion Not-feasible: Market failure is because of non-excludability or rise in the cost of exclusion.

3. Non-Rival Exclusion Feasible: Market failure takes place due to non-rival consumption.

4. Non-Rival Exclusion Not Feasible: impedimentis presentherei.e. non-rival consumption and non-excludability. except the first it is mentioned in the above the market failure occurs in all cases. The concept of social good is applicable in case III and IV but Case No. II is exclusively applicable for Merit good.

Market Imperfections:

As in perfect competition price setting by market only and not seller. Thus, in the market buyer and seller individually cannot influence price. But, of a single firms have some control over price and potential competition which results in imperfect competition and an inefficient allocation of resources.

If an industry comprises one firm producing a product for which there are no close substitutions is called “Monopoly”. In this moment monopoly is still constrained by market demand. Monopolist sets price above average cost and such a firm generally earn economic profit.

In competition economic profit will attract the new firms in to the industry. Sometime, a rational monopolist with the help of Government control the entry of new firms in the market and preserve economic profit in long run. This creates the impact of society loss and benefit of more products at lower price.

We find the number imperfectly competitive markets structures between monopoly and perfect competition. In one hand Oligopolist with small number of firms follow a certain degree of price setting power and on the monopolistic industry with large number of firms set the price for their product on the basis of differentiation of product or brand name.

It is clear on the basis of above discussion all kind imperfection in the market structure results in to lower output, underproduced and prices which above than they were in the perfectly competitive market. Besides, the equilibrium condition $P = MC$ does not hold, this system fails to provide the most efficient product mix.

What people want to be produced by the market depends upon the argument that is $P = MC$. But this argument rests on two conditions (1) Price provide a good approximation of the social value. (2) Marginal cost provides a good approximation of the product's social opportunity cost.

2.4 TAX

Public expenditure theory defines the legitimate areas of public concern as well as the permissible forms that policy may take. Moreover, as indicated above, public expenditure theory often contains its own theory of taxation in the sense that the expenditure decision rules define a set of taxes and transfers necessary to guide the market system to an optimum. Taxes contribute to the pursuit of efficiency and equity in these instances.

The theory of taxation becomes interesting in its own right only when the expenditure decision rules indicate the need for specific government expenditures without simultaneously specifying how those expenditures are to be financed. When this occurs, the same criteria that guide public expenditure analysis also apply to the collection of tax revenues. In particular, taxes should promote society's microeconomic goals of allocational efficiency and distributional equity.

A natural tension arises between tax policy and the goal of allocational efficiency, however. Most taxes generate distortions in the market system by forcing suppliers and demanders to face different prices. These distortions misallocate resources, thereby generating allocational inefficiencies. Resource misallocation is not desirable, of course, but it is an unavoidable cost of having to raise tax revenues. One goal of normative tax theory, then, is to design taxes that minimize these distortions for any given amount of revenue to be collected. Alternatively, if the government must use one of two or three specific kinds of taxes to raise revenue,

normative tax theory should indicate which of these taxes generates the minimum amount of inefficiency. Normative issues such as these are part of the allocational theory of taxation and, just as with the allocational issues of public expenditure theory, the guiding principle is pareto optimality. According to the pareto criterion, the government should collect a given amount of revenue such that it could not raise the same amount of revenue with an alternative set of taxes that would improve at least one consumer's welfare without simultaneously lowering the welfare of any other consumer. If such pareto improvements are impossible, then tax policy satisfies the pareto criterion of allocational efficiency, even though it necessarily generates inefficiencies relative to a no-tax situation.

The second unavoidable effect of taxes is that they reduce taxpayers' purchasing power so that they necessarily become part of the government's redistribution program. The government naturally wants its taxes to contribute to society's distributional goals, but there are two difficulties here. The first is that the distributional theory of taxation suffers from all the indeterminacies of redistribution theory in general. Thus, while public sector economists generally agree on normative tax policy with respect to society's allocational goals, there is considerable disagreement as to what constitutes good tax policy in a distributional sense. The second difficulty is the inherent trade-off between equity and efficiency in taxation. Generally speaking, achieving greater redistribution requires levying higher tax rates on the "rich" but, as we shall discover, higher tax rates tend to increase inefficiency. In addition, taxing a particular good might be desirable in terms of society's distributional goals but highly undesirable on efficiency grounds, or vice versa. Understanding the nature of these kinds of equity efficiency trade-offs has always been a primary goal of normative tax theory.

Two additional subsidiary goals of tax policy are ease of administration and simplicity, which relate to the practical problem of collecting taxes. The ease of administration criterion adopts the tax collectors' point of view. A tax has to be easy for a department of revenue to administer or it will not be used. Private information comes directly into play here. Self-interested taxpayers have a strong incentive to avoid paying taxes, and they can do so if they are able to hide information about themselves from the government's tax collectors. Illegal avoidance of taxes is called tax evasion. Legal sanctions or just plain old honesty may prevent some people from cheating on their taxes, but not everyone. Therefore, the design of any tax has to address the problem of potential evasion.

Consider an income tax as an example. Suppose the government wants to tax high-income taxpayers at a higher rate than low-income taxpayers as part of its redistributional policy. It may not be able to do this, however, if high-income taxpayers can hide much of their income from the authorities and thereby evade much of their proper tax liability. Also, the hiding of income forces the government to raise average tax rates to collect a given amount of revenue, which increases the inefficiencies associated with the

tax. Finally, some taxes are easier to evade than others. Therefore, the relative ease of evading different taxes has to be considered in determining what mix of taxes to use to meet the government's total revenue requirements.

The goal of simplicity adopts the taxpayers' point of view. Taxpayers have to be able to comply with the tax laws fairly easily for a tax to be used. They must be able to understand the tax laws and not suffer undue recordkeeping and filing burdens. A clear example of this principle is the preference in less-developed countries for taxing businesses rather than people. The average person is not educated enough to maintain records on income or prepare and file an income tax form, regardless of how honest or dishonest he or she may be. Therefore, the less-developed countries tax businesses simply because they are able to collect taxes on businesses.

2.5 DISTRIBUTION

If all the appropriate market and technical assumptions hold, would there be anything at all for the government to do? The answer is yes, because of society's concern for end-results equity. A perfectly functioning market system can assure an efficient allocation of resources. Perfect competition also satisfies the process equity norm of equality of opportunity and is likely to generate a high degree of social mobility. But, even a perfectly functioning market economy cannot guarantee that the distribution of the goods and services will be socially acceptable. As noted above, the market takes the ownership of resources as a given at any point in time. If society deems the pattern of ownership to be unjust, then it will probably find the distribution of goods and services produced by these resources to be unjust as well. Moreover, there are no natural market mechanisms to correct for distribution imbalances should they occur, nothing analogous to the laws of supply and demand, which, under the stringent conditions listed above, automatically select pareto-optimal allocations. Thus, a decision concerning the distribution of income is the first order of business in public sector economics in the sense that it cannot be assumed away. Even in the best of all worlds, with all the appropriate market and technical assumptions holding, the government has to formulate some policy with respect to the distribution of income if society cares about end-results equity. Society might simply choose to accept the market-determined distribution, but this is still a distribution policy requiring a collective decision on the part of the citizens even though it involves no actual redistribution. Moreover, no country has ever made this choice. At a minimum, then, a normative theory of the public sector must address the fundamental question of distributive justice: What is the optimal or just distribution of income?

We have already noted that the search for an optimal income distribution has not achieved a consensus. The only point to add is that any attempt to solve the distribution question is at odds with the preferred government-as-agent ground rule that follows from the principle of consumer

sovereignty. By its very nature, a redistribution of income must violate the principle of consumer sovereignty, so long as the losers in the redistribution do not willingly surrender some of their incomes. Therefore, redistribution policy cannot be based entirely on consumers' preferences, with the government simply acting as a passive agent responding to their preferences. It requires a collective decision articulated through some kind of political process, one in which government officials are likely to play a very active role. Normative public sector theory cannot be entirely devoid of political content. Politics necessarily enters the theory through society's attempt to resolve the distribution question.

The collective political decision is troublesome for normative public sector theory, however, because of the lack of a consensus on a set of distribution norms to guide the decision. Furthermore, the theoretical difficulties spread far beyond the distribution question. Since an economic system is a closed system in which all decisions are ultimately interrelated, any public policy decision on the distribution of income necessarily affects all the allocational issues as well. The government cannot simply make a particular redistribution decision, for better or worse, and be done with it.

Public sector economics has never totally come to grips with this problem. Economists have all too often assumed away distributional problems in order to analyse more comfortable allocational issues, knowing full well that separating allocational and distributional decisions is often not legitimate and may produce normative policy prescriptions quite wide of the mark. Some theoretical studies that do incorporate distributional considerations into their models make no attempt to justify particular distributional norms. Rather, the government's distributional preferences are simply taken as given, and normative policies are described with respect to these preferences. The spirit of the analysis is to "have the government provide us with a set of distributional preferences, and we will tell it what it should do." Perhaps this is all economists can hope to do with the distribution question, but it is at least unsettling that the resulting policy decision rules depend upon an assumed pattern of distributional preferences that has no special normative significance.

2.6 SOCIAL CHOICE, VOTING RULES, ARROW'S IMPOSSIBILITY THEOREM

Arrow's Impossibility Theorem the social sciences ran headlong into a brick wall in 1951 when Kenneth Arrow published his general impossibility theorem. There is no other way to put it. Arrow's theorem is truly devastating to democratic societies. Arrow was commissioned by the Department of Defence to develop a theory of how democratic societies should make decisions about public goods such as defence. He approached the problem of social decision making in the manner of cooperative game theory: Develop a minimal set of axioms to guide the social decision process that would be acceptable to a democratic society and then

determine the implications of those assumptions. Arrow put forth five axioms that he thought a democratic social decision process should possess. He then proved that, in general, no social decision process can simultaneously satisfy all five axioms. Arrow's theorem does not imply that a democratic society cannot make social decisions. They clearly can, and do. But it does imply that a democratic society cannot, in general, formulate consistent social decisions under a minimal set of conditions that would be acceptable to it. Arrow's theorem applies to social decisions on any issue, including the attempt to formulate a consistent social welfare function for resolving the problem of distributive justice. All students interested in public sector economics should have at least an intuitive understanding of Arrow's general impossibility theorem. It is considered by many to be the landmark result in twentieth-century political philosophy.

Arrow's Conditions of Social Choice:

We have seen earlier that the value judgments of a superman or a dictator about social welfare may not be valid due to various types of biases in human mind. As a result, a superman's or dictator's value judgements or values do not truly reflect the social choice. Arrow was the first welfare economist who attempted to lay down reasonably necessary conditions for achieving the social ordering which reflects the desire or the ordering of all individuals of the society. There are many ways in which social choice can be derived. Choice may be made by a dictator or through custom and tradition, or by some spiritual or religious head as was done in a traditional society or by individuals comprising a society through voting. The problem of social choice is easiest in a dictatorial rule in which all the social choices are made by the dictator and all the individuals comprising the society are compelled to accept it. Similarly, in a traditional society various religious and spiritual rules or customs make the problem of the social choice easy. No individual can disregard the social choice made by a religious and spiritual head.

But the problem of making a social choice based on individual ordering becomes difficult in a democratic society in which every individual is free to have his own individual ordering of various social states. Now, a pertinent question is as to whether the social choice can consistently be derived from individual orderings. Prof. Arrow has laid down certain necessary conditions which social choices must satisfy in order to reflect the individual orderings. He has laid down the following five conditions which must be met for an acceptable social welfare function. In last, these conditions reflect the value judgements of Arrow himself,

Condition 1: Transitivity or Consistency:

The first condition mentioned by Arrow is that social choices must be consistent or transitive. Transitivity of the social choices implies that if an alternative 'A' is socially preferred to alternative 'B' and alternative 'B' is socially preferred to alternative 'C', then alternative 'A' will not be socially preferred to alternative 'C'. If alternative 'C' is found to be socially

preferred to 'A', then the condition of transitivity would be violated and the choice would be inconsistent. It may be mentioned that the question of transitivity arises only when the social ordering has the properties of convexity. By convexity we mean that the various alternatives must be related to each other by preference or by indifference. Thus, two alternatives are said to be related or connected if for any pair of alternatives, 'A' and 'B', either 'A' is preferred to 'B' or 'B' to 'A' or there is Indifference between the two. Thus, the condition of transitivity must be found in the social choice because it has been considered by Arrow as a condition for consistent social choice.

Condition 2: Responsiveness to Individual Preferences:

The second condition is that social ordering must depict responsiveness to individual preferences. It states that social ranking must respond positively to the individual ranking. This means that the social choices must change in the same direction as the choices of the individuals constituting the society. To quote Arrow, the social welfare function is such that the social ordering responds positively to alteration in individual value or at least not negatively. This implies that social choice reflects the values of different individuals of the society and it changes as the individual values change. Suppose an alternative 'A' is socially preferred to 'B' on the basis of a set of individual orderings. If change occurs in the ordering of individuals so that some individuals prefer alternative 'A' more strongly than before and no one's preference for it declines, then 'A' must remain socially preferred to 'B'. It is worth mentioning that this condition would be violated "if there were some individuals against whom society discriminates in the sense that when their desire for some alternative increases relative to other alternatives, the social desirability of that alternative is reduced.

Condition 3: The Condition of Non-Imposition:

The third condition is of non- imposition. This states that social choices must not be imposed independently of individual preferences. For instance, it implies that if no individual in the society prefers alternative 'B' to alternative 'A' and any one or few other individuals in the society prefer alternative 'A' to alternative 'B', then society must prefer 'A' to 'B'. This condition implies that the choice of an alternative by the society must satisfy Pareto criterion. This also implies that the social choice must not be determined by anyone outside the community.

Condition 4: The Condition of Non-Dictatorship:

The fourth condition relates to the existence of non-dictatorship. It states that social choices must not be dictated by any one individual in the community. For instance, 'A' must not be socially preferred to 'B' only because any one individual in the society prefers 'A' to 'B' irrespective of the preferences of other individuals. If this condition is violated, then the individual whose preferences are regarded as social preferences will in fact be a dictator. This condition implies that the social choices must be determined by the democratic method of voting by all individuals rather than dictatorial one of imposition of his will by an individual.

Condition 5: Independence of Irrelevant Alternatives:

The fifth condition is of d doe independence of irrelevant alternatives. According to this, social ranking of any two alternatives is determined exclusively by individual ranking of these two alternatives alone and should not be affected at all by individual preferences with respect to other alternatives. In other words, a most preferred alternative out of a given set of available alternatives must be independent of (that is, not affected by) other alternatives, which are not available. Suppose three alternatives, 'A', 'B' and 'C', are available and society prefers 'A' to 'B' and 'B' to 'C'. If 'C' were no longer available, then this condition implies that it must not be the case that society then prefers 'B' to 'A'. Thus, the social preference of 'A' over 'B' depends only on individual preferences of just these two Ted and arses that the alternatives, 'A' and 'B', and not on any other alternative which is not immediately relevant.

The above five conditions of Arrow reflect his value judgements and they seem to be quite reasonable set of conditions for making social choices in a free democratic society However. Arrow has shown that it is impossible to make social choices without violating at least one of the above five conditions. In other words, it is not possible to construct a social welfare function on the basis of Individual values that satisfy all the above conditions.

(Ref: Dr. H L Ahuja, Advanced Economic theory, 19th Revised edition.)

According to Impossibility Theorem, in a democratic country public choice for public goods based on majority of voting are not sufficient for social welfare maximisation through supply and consumption of public goods by the government and people respectively. Besides majority of voting, the above-mentioned conditions should be satisfied, that enable to arrive at effective social indifference curve and the social welfare function. Hence, this theory is known as the impossibility theorem.

The impossibility theorem of Arrow can be explained with the help of example. Three voters (A, B, C) are selecting among three budgetary policies (X, Y, Z). Policy alternative X represents a decision to build three public libraries, policy Y, a decision to build two libraries, and policy Z, a decision to build one library.

Examples of Majority Voting: Individual Preferences for Alternative Budget Policies

Table No. 2.1

A. Results: Intransitive Policy Alternatives			
Voter	Preference 1	Preference 2	Preference 3
A	X	Y	Z
B	Y	Z	X
C	Z	X	Y
B. Results: Transitive Policy Alternatives			

Voter	Preference 1	Preference 2	Preference 3
A	X	Y	Z
B	Y	Z	X
C	Z	Y	X

In above table, A) illustrates a situation in which majority voting violates the set of conditions necessary for consumer sovereignty to be maintained in collective democratic decision making. Condition 1, the transitivity condition, in particular, is violated, leading to what is known as the impossibility theorem or voting paradox. Since a majority of the voters (two out of three) prefer policies X to Y, Y to Z and Z to X, the result is intransitive or inconsistent in that there is no winner. The sequence in which the voting occurs would determine the final outcome is illogical result. The outcome is arbitrary since either Z, X or Y will win depending on the ordering of the voting sequence. The transitivity occurs because one voter prefers two extreme policies (Z for one library and X for three libraries) over the median or intermediate alternative, Y for two libraries. This is an unlikely position for a voter to take. To prefer three libraries as a second choice instead of two libraries. When it is graphed, the result is twin-peaked preference function for voter C.

If voter C behaves in a more rational manner and prefers two libraries as a second choice, the intransitive problem disappears and the solution becomes determinate. This is depicted in above table by outcome B) with showing a single peaked preference function for voter C. we begin with a pairing of Y versus Z, Y wins over Z and also defeats X. Finally, a pairing Y versus Z finds Z the winner, but Y wins over Z. Thus, Y is the clear-cut winner despite the ordering of the voting sequence. These results also indicate budgetary size.

Arrow's impossibility theorem of public choice can be presented with the help of figure below.

Figure No. 2.1

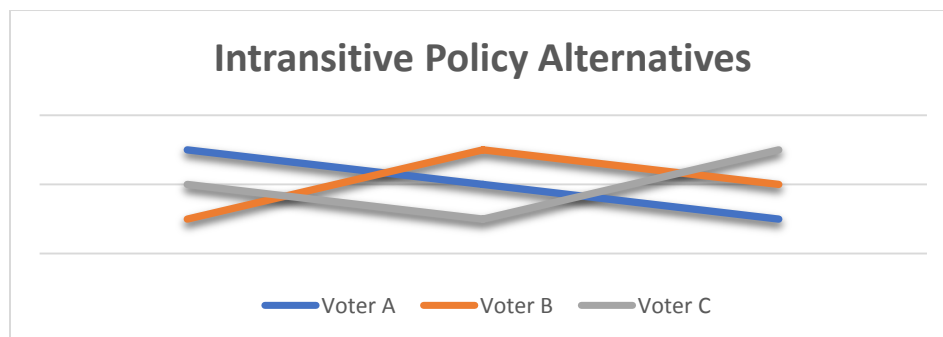
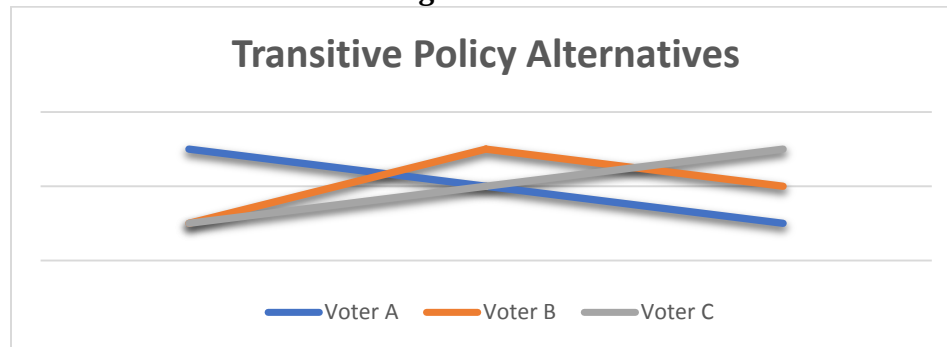


Figure No. 2.2



The impossibility theorem of Arrow is criticised on various grounds as follows.

1. Arrow's theorem could not show intensity of public choices of people for public goods.
2. Arrow has depicted a very pessimistic scenario of political process of arriving at fiscal decision, for supplying public goods.
3. We cannot say common voter reveals his preference for public goods through voting only.
4. It is not true that, the government always taken into account public choices for public goods of people while supplying them.
5. Arrow's theory cannot be applied to public goods of heterogeneous in nature.

Even though, Arrow's theorem of public choice is criticised severely, its total importance cannot be discarded. This theorem explains how the government provides public goods to its citizens in a democratic country. Only majority of voting to reveal public preferences for public goods is not sufficient, but consistency in choice is also a must for fiscal decision and social welfare maximisation. The noteworthy merit of the theory is, it describes how it is possible to materialise social welfare maximisation of the society through supply of public goods by the government.

2.7 SUMMARY

The standard justification of state intervention takes as its starting point the behaviour of the economy in the absence of the government, that is, in the hypothetical situation of a free market economy. From the basic theorems of welfare economics, if this economy is perfectly competitive and there is a full set of markets, then, assuming that an equilibrium exists, it is Pareto-efficient. An externality represents a connection between deferent economic agents which are outside the price system of the economy. As the level of externality generated is not controlled directly by price, the standard efficiency theorems on market equilibrium cannot be applied. The market failure that can result raises a potential role for correction through policy intervention. Public expenditure theory defines the legitimate areas of public concern as well as the permissible forms that

policy may take. Moreover, as indicated above, public expenditure theory often contains its own theory of taxation in the sense that the expenditure decision rules define a set of taxes and transfers necessary to guide the market system to an optimum. Taxes contribute to the pursuit of efficiency and equity in these instances. of society's concern for end-results equity. A perfectly functioning market system can assure an efficient allocation of resources. Perfect competition also satisfies the process equity norm of equality of opportunity and is likely to generate a high degree of social mobility. He then proved that, in general, no social decision process can simultaneously satisfy all five axioms. Arrow's theorem does not imply that a democratic society cannot make social decisions.

2.8 QUESTIONS

1. Explain theorems of welfare economics.
2. Discuss need for State Intervention.
3. What is Externalities how it leads Market towards Failure.
4. Explain Arrow's impossibility Theorem.

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MODULE II

3

PROVISION OF PUBLIC GOODS

Unit Structure

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Classification of Goods
- 3.3 Optimal Provision of Public Goods: Pure and Local
- 3.4 Merit goods
- 3.5 Lindahl's Voluntary Exchange Approach
- 3.6 Conclusion
- 3.7 Questions
- 3.8 References

3.0 OBJECTIVES

The major objectives of the present unit are as follows:

1. To understand the concepts of public goods, private goods, Club goods and Merit goods;
2. To analyse the provisions for supplying public goods;
3. To study the Lindahl's Voluntary Exchange approach;

3.1 INTRODUCTION

Government plays a vital role in, more or less, all types of economic systems. Government makes provisions in its public budget to provide public goods to the people so that social welfare can be promoted. To make provision of supply of public goods by the government, it should know choices, preferences and priorities of the people for public goods. This demands to study preferences or choices of people for public goods. The present unit discusses the supply of public goods to be made by the government by making their provision in its budget through taking into consideration public preferences or choices revealed by the people. Hence, the present unit study the different categories of goods in public economics, optimal provision of public and local goods, concept of merit goods and Lindahl's approach of public expenditure.

The present unit is classified into following segments:

3.2 CLASSIFICATION OF GOODS

There are four categories of goods in economics, which are defined based on two attributes. The first attribute is excludability, or whether people can be prevented from using the good. The second is whether a good is rival in consumption: whether one person's use of the good reduces another person's ability to use it.

Combinations of these two attributes create four categories of goods:

Table No. 3.1

	Excludable	Non- excludable
Rival	Private Goods Food, clothing, car, personal electronics	Common Goods Fish stock, timber, coal
Non- Rival	Club Goods Cinemas, private parks, satellite TV	Public Goods Air, national defence

- **Private goods:** Private goods are excludable and rival. Examples of private goods include food, clothes, private vehicles. There are usually limited quantities of these goods, and owners or sellers can prevent other individuals from enjoying their benefits by charging price for it. So private goods are exchanged for payment. Private goods are scarce, which causes competition for it. Since people have to pay to obtain it, private goods are much less likely to encounter a free-rider problem than public goods and so the market will efficiently allocate resources to produce private goods. In daily life, examples of private goods abound, including food, clothing, and most other goods that can be purchased in a store. Take an example of an ice cream cone. It is both excludable and rivalrous. It is possible to prevent someone from consuming the ice cream by simply refusing to sell it to them if they are not ready to pay for it. Additionally, it can be consumed only once, so its consumption by one individual would definitely reduce others' ability to consume it.
- **Common goods:** Common goods are non-excludable and rival. Because of these traits, common goods are easily over-consumed, leading to a phenomenon called "tragedy of the commons". In this situation, people withdraw resources to secure short-term gains without regard for the long-term consequences. A classic example of a common good is fish stocks in international waters. No one is excluded from fishing, but as people withdraw fish without limits being imposed, the stocks for later fishermen are depleted.
- **Club goods:** Club goods are excludable but non-rival. This type of good often requires a "membership" payment in order to enjoy the benefits of the goods. Non-payers can be prevented from access to the

goods. Cable television is a classic example. Broadband or mobile network also belong to this category. It requires a monthly fee, but is non-rival after the payment. The characteristics of goods place them either towards the pure private good end or towards the pure public good end. There are many goods, which are indivisible, and which many individuals could consume simultaneously upto the capacity constraint, thereafter the good becomes congested. There exists some exclusion technology, which makes it possible to charge individual prices for the use of the commodity. Swimming pools, golfcourses, bridges, etc. are considered as club goods

- **Public goods:** A public good is a good whereby no individual can be excluded from benefiting from it. This could come in the form of a government public good such as street light, defence, public park or a natural public good such as air, sunlight. Public goods are non-excludable and non-rival. Individuals cannot be excluded from using them, and use by one individual does not reduce the good's availability to others. Examples of public goods include the air we breathe, public parks, and street lights. Public goods may give rise to the "free rider problem". A free-rider is a person who receives the benefit of a good without paying for it. This may lead to the under-provision of certain goods or services. Public goods can be pure or impure. Pure public goods are those that are perfectly non-rivalrous in consumption and non-excludable. Impure public goods are those that satisfy the two conditions to some extent, but not fully.

Following are the important features of public goods.

1. Non-excludability:

Non-excludability means that the producer of the good is unable to prevent others from using it. For instance, it would be extremely difficult to prevent each person from using a traffic light. Public goods such as defence, policing, and the law are all non-excludable. Everyone benefits from policing, which makes it impossible to charge some but not others. In turn, this presents us with the 'free-rider problem'.

2. Non-rival Consumption:

In every economy, some goods are provided by the government to the entire people. Non-rivalry means that more than one person can use the good without diminishing others ability to use it. Specifically, public good is the one that is provided to the society as a whole and consumption by one individual doesn't reduce its availability. Public goods are consumed jointly. As a result of this they are non-rival in nature.

3. Externality:

The benefits accrued from public good is external to the consumer. Public goods are subject to the principle of consumer sovereignty. They are produced on the basis of individual preference, but the satisfaction derived from public goods by an individual consumer is independent of his own

contribution. This is so because, the cost met by government through budget.

4. Benefit Obscure:

Public goods are obscure in nature. It is very difficult to realise the benefit from public good. The example of street light, it is difficult to measure that how much benefits received from street light by all the citizens of the country.

5. Payee and Beneficiary not identical:

Generally, public goods are beneficiary but at the same who pays for it to make its provision certainly not a real beneficiary. In other words, through government budget public goods are made available, it means payee and beneficiaries are not identical.

3.3 OPTIMAL PROVISION OF PUBLIC GOODS: PURE AND LOCAL

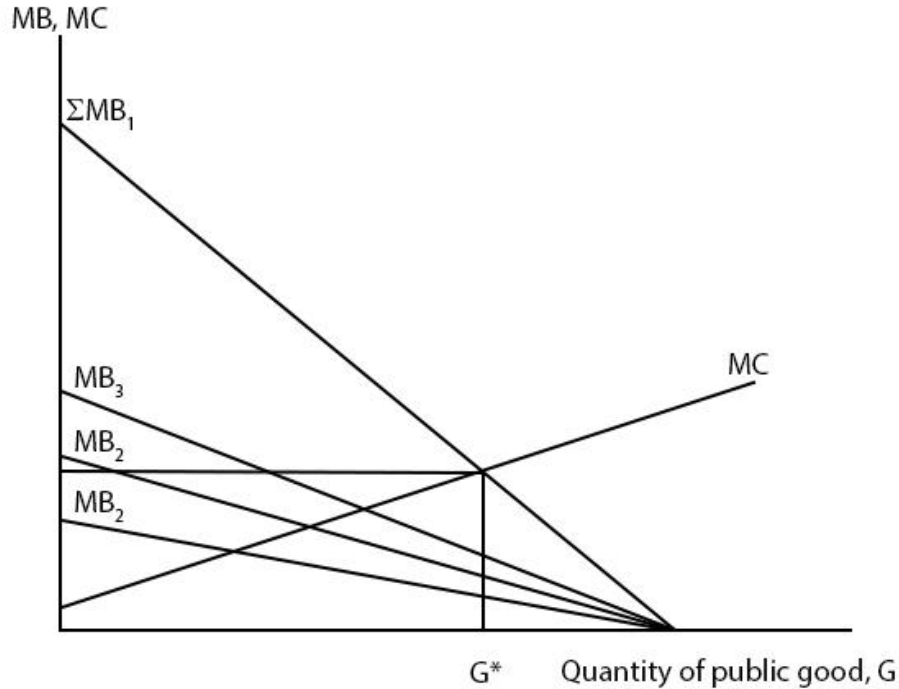
The production of public goods results in positive externalities for which producers don't receive full payment. Consumers can take advantage of public goods without paying for them. This is called the "free-rider problem". If too many consumers decide to "free-ride," private costs to producers will exceed private benefits, and the incentive to provide the good or service through the market will disappear. The market will thus fail to provide enough of the good or service for which there is a need. Government funding and proper provision for public goods as per requirement of people is difficult task to perform. The problem then is how the government should determine how much of such goods are to be produced and allocated. The difficulty lies in deciding the type and quality of a public good that should be supplied and how much a particular consumer should be asked to pay.

The government uses cost-benefit analysis to decide whether to provide a particular good. If marginal benefit is greater than marginal cost there is an under allocation of a public good. If marginal cost is greater than marginal benefit there is an over allocation of a public good. When marginal cost = marginal cost, then there is an optimal allocation of public goods.

3.3.1 Demand for Public Goods:

The aggregate demand for a public good is the sum of marginal benefits to each person at each quantity of the good provided. The economy's marginal benefit curve (demand curve) for a public good is thus the vertical sum all individual's marginal benefit curves. The vertical summation of individual demand curves for public goods also gives the aggregate willingness to pay for a given quantity of the good.

Figure No. 3.1



The sum of the individual marginal benefit curves (MB) represent the aggregate willingness to pay or aggregate demand (ΣMB). The intersection of the aggregate demand and the marginal cost curve (MC) determines the amount of the good provided. Optimal quantity of public good is G^*

This is in contrast to the aggregate demand curve for a private good, which is the horizontal sum of the individual demand curves at each price. Unlike public goods, society does not have to agree on a given quantity of a private good, and any one person can consume more of the private good than another at a given price.

The efficient quantity of a public good is the quantity that maximizes net benefit (total benefit minus total cost), which is the same as the quantity at which marginal benefit equals marginal cost.

3.3.2 Mathematical explanation of optimal provision of pure public good:

Suppose Mr. John has preference over cookies (C) and Missiles (M): $U_J(C, M)$

To John, the marginal utility of missile is worth,

$$\frac{MU_M^J}{MU_C^J} = MRS_{MC}^J$$

For Tom, preferences are $U_T(C,M)$

The marginal utility for of missile is worth

$$\frac{MU_M^T}{MU_C^T} = MRS_{MC}^T$$

Unlike the case of private goods, where aggregate demand is found by summing the individual demand horizontally, with public goods aggregate demand is found by summing vertically.

The social marginal benefit of the next missile is the sum of John and Tom's marginal rate of substitution: $\Sigma MRS_{M,C}^{J,T}$

The efficiency requires,

$$\sum_{i=1}^n MRS_{M,C} = \frac{MC_M}{MC_C} \quad (i \text{ is every individual})$$

So the social efficiency is maximized when the marginal costs are set equal to the sum of MRS, rather than individual MRS. This is because the good is non rival. Since a unit can be consumed by all the consumers, society would like the producer to take into account all consumers' preferences.

3.3.3 Provision of Local Public Goods:

Local public goods are public goods that can be enjoyed only by residents in the local community: for example, local public school, beaches, parks, etc. are typical examples of public goods. Tiebout Charles (1956) proposed a different solution for provision of local public goods. He suggests that lots of public goods are provided by local expenditures, and if there were enough communities, individuals would reveal their true preferences for public goods by the choice of community in which to live (in much the same way as individuals reveal their preferences for private goods by their choices).

Where there is a wide range of choices, all those deciding to live in the same community would have essentially the same taste, and there would be no problem of reconciling conflicting preferences. This is an interesting idea since it suggests that the invisible hand can solve the important problem of under-provision of public goods.

People living nearby may or may not be excludable, but people living farther away can be excluded. Such goods that are produced and consumed in a limited geographical area are local public goods. Schools are local—more distant people can readily be excluded. With parks it is more difficult to exclude people from using the good; nonetheless, they are still local public goods because few people will drive 30 miles to use a park.

Suppose that there are a variety of neighborhoods, some with high taxes, better schools, big parks, beautifully maintained trees on the streets, frequent garbage pickup, a first-rate fire department, extensive police protection, and spectacular fireworks displays, and others with lower taxes and more modest provision of public goods. People will move to the neighborhood that fits their preferences. As a result, neighborhoods will evolve with inhabitants that have similar preferences for public goods. Similarity among neighbors makes voting more efficient, in turn. Consequently, the ability of people to choose their neighborhoods to suit their preferences over taxes and public goods will make the neighborhood provision of public goods more efficient. The “Tiebout theory” shows that local public goods tend to be efficiently provided. In addition, even private goods such as garbage collection and schools can be efficiently publicly provided, when they are local goods, and there are enough distinct localities to offer a broad range of services.

3.4 MERIT GOODS

So far, we have classified economic goods into categories of private and public good based on their consumption characteristics-joint or private. Goods that have higher degree of joint or collective consumption characteristic are usually provided by the public sector and those goods with lower degree of joint consumption can be supplied by the private sector. But, there can be exception to this tendency as we may notice in a society.

Sometimes, the public sector may decide to actively participate in the allocation of certain economic goods which are essentially private goods-rival and excludable in consumption-and therefore can be otherwise supplied by the private sector. These economic goods are considered by the government as meritorious or important as they generate large social benefits for every individual and the society. Examples of such goods and services are **education, healthcare, job training program, public library** and others. For these goods, the government thinks that everybody in a society should consume a certain level of these goods irrespective of their ability to pay for those goods and also believes that if left to the private sector alone, these goods will be under provided. These governmentally supplied or heavily subsidized private goods are called the **Merit goods** in economics.

In 1959 R. A. Musgrave developed the concept of Merit goods. Goods and services (which may be efficiently provided by the private sector) actually provided by the public sector in view of the normative consideration that all should be able to benefit from them have been labelled as merit goods. The merits goods play an important role in welfare maximization. Merits goods are also called as public good but their provision cannot be explained in the same way as the provision of public goods. The provision of merit goods depends upon the choice. These goods are under-consumed

in a free market because of ignorance and externalities. As we know Education and health services are good examples of merit goods. If they are left to free market choice these goods will not be produced in adequate quantity.

Merit goods are under provided or supplied at a less than optimal level by the private sector because the private market for such goods suffers from market failure that is the equilibrium outcome of the private market does not maximize social efficiency. **There are three main reasons for this market failure and need of public provision for merit goods:**

Firstly, consumption of merit goods generates large positive externalities which means social marginal benefit (SMB) from merit goods consumption exceeds the private marginal benefit (PMB) that is $SMB > PMB$. For example, we can think about education. An individual receives private benefit from education through higher productivity, income and better job in his or her life but others in the society also gains in terms of social benefit to get an educated, enlightened and responsible citizen. Therefore, consumption of education does not only create benefit for that person but also for others in the society which is not accounted for in the private market equilibrium. **Secondly**, people suffer from imperfect information regarding the consumption of merit goods. Government feels that individuals may not act in their own best interest partly because they don't have complete information about the long-term benefits of merit goods. Let's take the example of education again. Education is a long-term investment decision for children. The costs of education are paid in the current period but the benefits from education in terms of higher productivity, income, greater occupational mobility, better employment opportunities could be received in distant future. Sometimes, people are unaware of these long-term benefits of education for their children and therefore, under consume it. **Third**, the **equity ground** is another argument for the public provision of merit goods. Families with low income do not have the ability to pay for their children's education even when they know the benefits of education. Therefore, subsidized or free education from government can help them to attain that desired level. Therefore, merit goods can be provided both privately and publicly as we can see both private and public schools, hospitals, health insurance and other services to coexist in a society.

3.5 LINDAHL'S VOLUNTARY EXCHANGE APPROACH

The first clear formulation of a theory of public expenditure was presented by Knut Wicksell and Erik Lindahl. Voluntary Exchange Approach is the analysis of the provision of public goods which seeks to establish conditions under which these goods can be provided on the basis of unanimous agreement. Under the Voluntary exchange model, tax levels are determined automatically, because taxpayers pay proportionately for

the government benefits they receive. Putting it another way, the individuals who benefit the most from public goods pay the most taxes.

The voluntary approach was first advanced by Knut Wicksell who argued that:

- Each public good should be financed by a separate, identifiable tax.
- The unanimous agreement of all members of the society would be required to decide on the amount of the good to be supplied.

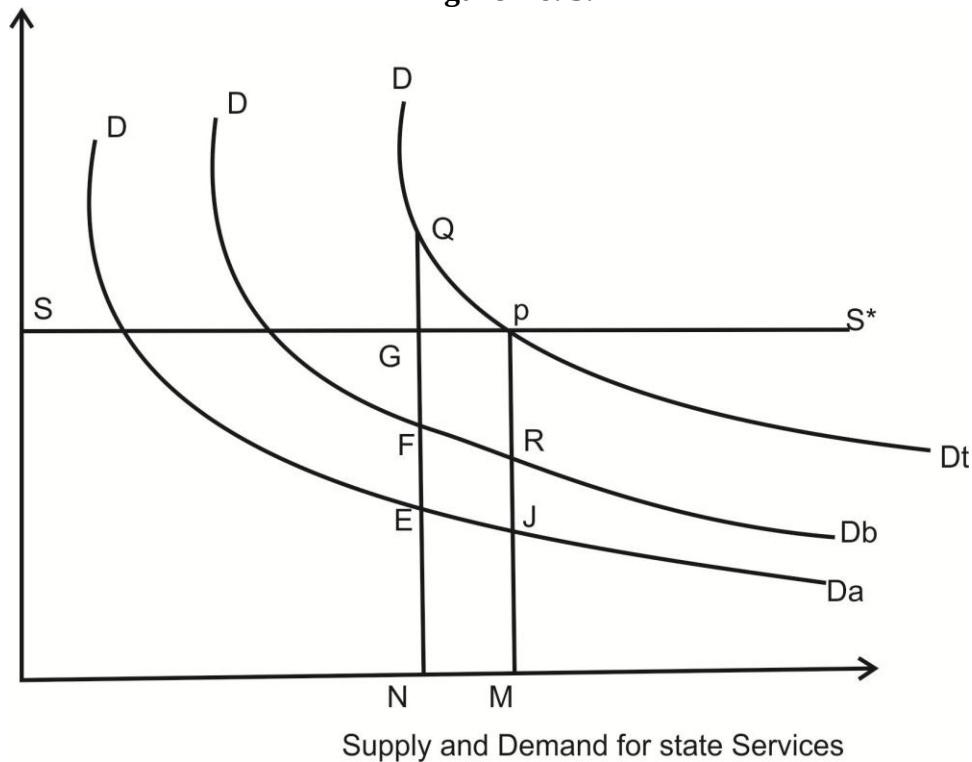
Erik Lindahl (21 November 1891 – 6 January 1960) was a Swedish economist. He was also an advisor to the Government of Sweden and the central bank. Lindahl model discusses the question of financing public goods in harmony with individual benefits. The quantity of the public good satisfies the requirement that the total marginal benefit equals the marginal cost of providing the good. Erik Lindahl was deeply influenced by his professor and mentor Knut Wicksell and proposed a method for financing public goods permissible to show that consensus of people. As people are different in nature, their preferences are different, and consensus requires each individual to pay a somewhat different tax for every service, or good that he consumes. If each individual's tax price is set equivalent to the marginal benefits received, each individual is made better off by provision of the public good and may accordingly agree to have that service level provided.

Lindahl tax is a system of taxation in which individuals pay for the provision of a public good in accordance to their marginal benefits. So each individual pays according to his/her marginal benefit derived from the public good. e.g. If A loves scenic beauty and likes to be close to nature he might be ready to pay 5 dollars per day for sitting in a park, whereas a college student who does not visit the park very often will not be ready to pay so much, but might agree to pay 1 dollar. So a person who values the good more pays more. In such cases, the problem of supply of the public good, at optimal levels arises. Lindahl taxation is a solution for this problem.

Lindahl tries to solve the following 3 problems:

- Extent of state activity
- Allocation of the total expenditure among various goods & services
- Allocation of tax burden

Figure No. 3.2



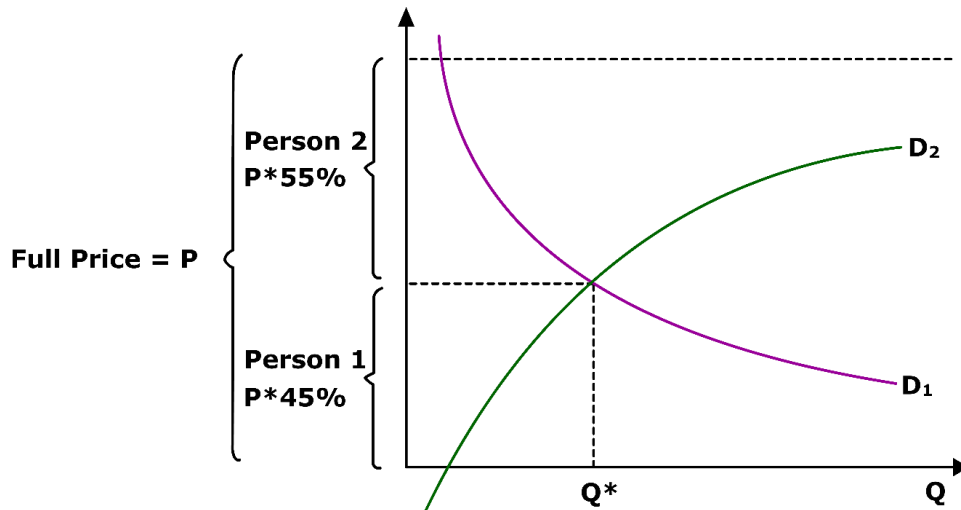
In the Lindahl model, if SS^* is the supply curve of public goods it is assumed that production function of public/social goods is linear and homogenous. DD_a is the demand curve of taxpayer A, and DD_b is the demand curve of taxpayer B. The vertical summation of the 2 demand curves results in the community's total demand schedule for public goods. A and B pay different proportions of the cost of the services. When QN is the amount of public goods produced, A contributes NE and B contributes NF ; the cost of supply is NG . Since the state is non-profit organization, it increases its supply to OM . At this level, A contributes MJ and B contributes MR (the total cost of supply). Equilibrium is reached at point P on a Voluntary-exchange basis.

Lindahl equilibrium:

Lindahl taxes are also known as Benefit taxes. Lindahl equilibrium is a sort of economic equilibrium under such a tax. It is a method of finding the optimal level for the supply of public goods or services. The Lindahl equilibrium happens when the total per unit price paid by each individual equals the total per unit cost of the public good.

In the Lindahl tax scheme it is essential that the system should provide for a Pareto optimal output of the public good. The other important condition is that the Lindahl tax scheme should connect the tax paid by an individual to the benefits he derives. This system promotes justice. If the individual's tax payment is equivalent to the benefits received by him, and if this linkage is good enough then it leads to Pareto optimality. Consider the following figure:

Figure No. 3.3



So, it is observed that X is paying $P*45\%$ per unit, and Y is paying $P*55\%$ per unit, and the economy produces Q^* units. This point is called the **Lindahl equilibrium**, and the corresponding prices are called **Lindahl prices**. Thus Lindahl equilibrium is a theoretical state of an economy where the optimal quantity of public goods is produced and the cost of public goods is fairly shared among everyone.

3.6 CONCLUSION

Thus, this unit is devoted to classification of goods in Public Economics, provision of Public goods and Lindahl's Voluntary Exchange Approach. The unit discusses four categories of goods in Public Economics based on two attributes- Excludability and Non-excludability. Merit goods are another category of public goods, supply of which can be done by private as well as public provision. Provision of public goods is one of the difficult tasks for government. It is necessary to undertake the production of public goods and their supply to the people, which enables social welfare maximization. The efficient quantity of a public good is the quantity that maximizes net benefit (total benefit minus total cost), which is the same as the quantity at which marginal benefit equals marginal cost. The unit thoroughly describes Voluntary Exchange Approach for the provision of public goods which seeks to establish conditions under which these goods can be provided on the basis of unanimous agreement. Lindahl tries to solve the problems of provision of public goods by fixing extent of state activity, allocation of total expenditure among various goods & services and by allocation of tax burden. Besides this, the unit also highlights the TieboutCharles solution to provision of Local public goods.

3.7 QUESTIONS

Q1. Explain various categories of goods noticed in Public Economics.

- Q2. What is Public goods? Highlight the main features of public goods.
- Q3. Illustrate the optimal provision of Pure and Local Public goods.
- Q4. Illustrate the optimal provision of Public goods.
- Q5. What is Merit goods? What is the need of Public Provision for Merit Goods?
- Q6. Analyse the Lindahl's Voluntary Exchange Approach.
- Q7. What is Lindahl tax, explain the Lindahl's equilibrium?

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EVALUATION OF PUBLIC EXPENDITURE

Unit Structure

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Preference Revelation Mechanism
- 4.3 Private Provision of Public Goods
- 4.4 Evaluation of Government Expenditure: Cost Benefit Analysis
- 4.5 Conclusion
- 4.5 Questions
- 4.6 References

4.0 OBJECTIVES

1. To insight into Preference revelation Mechanism
2. To explain the private provision of Public Goods
3. To analyze the Cost benefit theory to evaluate Government expenditure project.

4.1 INTRODUCTION

To smooth supply of public goods, planners should have knowledge about individual preference functions. In the democratic countries, the government takes into account public preferences for the public goods and makes provision of their supply by allocating productive resources for their productions. This enables proper and rational allocation and utilization of productive resources whereby social welfare maximization can be materialized through the consumption of public goods produced. This is analyzed by the theories in Public Economics. They are known as the theories of public choice or social choice. Present unit elaborate theories of social choices given by Wicksell and Arrow. Private provision of public goods and evaluation of government expenditure through cost benefit analysis are also illustrated.

The present unit is classified into following segments:

4.2 PREFERENCE REVELATION MECHANISM

In social choice theory, preference revelation is a field of study related to the establishment of the demand for the public good. According to some

economists, if the government planners do not have "full knowledge of the individual preference functions", it is likely that public goods will be under supplied or over supplied.

The conditions that must hold if a public good is to be provided at a Pareto-efficient level are well established in the economics literature and were first set out formally by Samuelson (1954, 1955). Assuming that the public good is financed out of non-distortionary taxation, these conditions require that the good be provided up to the level at which

$$\sum_i MRS_{gx} = MRT_{gx}$$

Where MRS_{gx} is the marginal rate of substitution between the public good g and a private good numeraire, x ; MRT_{gx} is the marginal rate of transformation between two goods; and there are i consumers of the public goods.

Government in any type of economy endeavorsto maximize social welfare. But it should be known to the government for which public goods people have shown their choices. People should make choice of public goods preferred by them. In the democratic countries, the government takes into account public preferences for the public goods and makes provision of their supply by allocating productive resources for their productions. This enables proper and rational allocation and utilization of productive resources whereby social welfare maximization can be materialized through the consumption of public goods produced. This is analyzed by the theories in Public Economics. They are known as the theories of public choice or social choice.

The theories of public or social choice include the following theories

1. Wicksell's Approach to reveal Public Choice: Absolute and Relative Unanimity Principle/Approach
2. Arrow's Impossibility Theorem

1. Wicksell's Approach:

In the democratic government countries, political process is very much important to provide public goods by the government. Since people reveal preferences for public goods through political process, the government can allocate productive resources in the society for the production of public goods. Public choices for public goods, problems in revealing public preferences and solutions have been discussed for the first time by a Swedish economist Knut Wicksell. This is known as Wicksell's Approach to reveal public choice. It is divided into Absolute Unanimity Approach and Relative Unanimity Approach.

The efficient allocation of productive resources in the society requires political process. Even in the democratic form of government based society individual preferences of the people for public goods are taken into consideration, still there remain problems. Individual preferences based on

the concept of an equal vote for all, are unlikely to be revealed and implemented effectively by a system of simple majority voting. Where a majority of 50% plus one vote may carry a decision. Hence, a minority of 50% minus are of the citizens may be obliged to help pay for a public type economic good with their taxes, even though they do not desire the allocation of the good. Such costs to be "political losers" of a majority voting decision are referred to as voter externality costs. According to Wicksell, in a democratic form of government country Absolute Unanimity method can be used for revealing public preferences for the public goods by the people. On the basis of preferences for public goods revealed by the people, the government can provide these public goods through allocation and utilization of the productive resources for their production. The provision of supply of a public good can be made by the government in the public budget, and by supplying it to the people can achieve social welfare maximization. But for this 100% people should cast their votes in favour of supply of that public good by the government. If one of them is against the supply of that public good, then the government cannot take that fiscal decision and provide for that public good. This is known as Absolute Unanimity Approach of the Wicksell, which is useful in decision making about supply of public goods by the government, but difficult. Therefore, an alternative mechanism of revealing preferences for public goods in the democratic country was evolved, that is Relative Unanimity Approach.

Since a single voter by casting vote against the fiscal decision to supply a public good by the government under Absolute Unanimity Approach, Wicksell propounded an alternative approach or solution to reveal public preferences for the supply of public goods by the government, which is known as Relative Unanimity Approach or Qualified Majority Voting. Under this approach, the approval percentage for a budget policy should be as close to low percent. A majority of one thirds ($1/3$), two thirds ($2/3$), three fourths ($3/4$), or five sixth ($5/6$) might be required for approval of a budget policy under the unanimity rule. This enables to know that an individual and his vote against the budget policy cannot restrict supply of that public good, and cannot exploit the people who are in favour of that fiscal decision. This rule allows an acceptance number of collective decisions to be made. It also facilitates to reduce voter externality costs. A scientific number of votes allow to supply that public goods by the government by making its provision in public budget. Hence, it is very simple principle of revealing public preferences for public goods by the people and their supply as well by the government.

According to Wicksell, marginal benefit from a public expenditure should be related to the marginal tax cost of providing the public good, and then the relative unanimity rule should be applied to the government decision. This is consistent with his preference for the voluntary exchange approach to public goods allocation.

Thus, the government can collect preferences of the people for public goods through absolute or relative unanimity rule and by allocating and utilising productive resources can supply public goods to the people whereby social welfare of the society can be maximised. This approach also provides for spending and revenue decision by the government simultaneously. Hence, it is an important theory of public choice.

But Wicksell's theory or approach to public choice is criticised on the following grounds.

1. In a democratic country, first it is decided which and how much quantity of public goods to be provided, and then they are supplied to the people.
2. Government cannot impose taxes on the people in proportion of its public expenditure.
3. In a democratic country, government estimates its public expenditure first, and then it endeavors for collecting necessary revenue, therefore this theory of public choice is not useful for the government decision making.
4. All people do not know to reveal preferences for public goods being supplied by the government, only a few people know that.
5. In reality, the government does not take into consideration public choices for the supply of public goods to the people.

2. Arrow's Impossibility Theorem of Public Choice:

Kenneth Arrow has explained the problems involved in decision making by the government. In a democratic country fiscal decision of the government to supply public goods cannot only depend on the majority of voting. A majority of voting is not sufficient only in fiscal decision of the government for supplying public goods. It does not indicate the effective social indifference curve, and consequently the social welfare function. Hence, this theory is known as the Impossibility theorem. According to Arrow, following conditions must be met if a collective decision reached under majority voting conditions is to accurately reveal the individual economic preferences, which constitute the effective social indifference curve and the social welfare function:

1. Social choices must be transitive or consistent. That is, a unique social ordering must exist which will yield a clear-cut winning alternative regardless of the ordering sequence in which alternative choices are voted on.
2. The social welfare function must be non-perverse in the sense that an alternative policy which might otherwise have been chosen by the society must not be rejected.
3. The rankings of the choices in the social welfare function between two alternatives must be independent of the ranking by individuals of other alternatives, which are irrelevant to the choice between the two

alternatives. The elimination of any one alternative must not influence the ranking of the other alternatives in the social welfare function.

4. Voters must have free choices among all alternative policies.

The impossibility theorem of Arrow can be explained with the help of example. Three voters (A, B, C) are selecting among three budgetary policies (X, Y, Z). Policy alternative X represents a decision to build three public libraries, policy Y, a decision to build two libraries, and policy Z, a decision to build one library.

Table No. 4.1
Examples of Majority Voting: Individual Preferences for Alternative Budget Policies

a) Results: Intransitive Policy Alternatives			
Voter	Preference 1	Preference 2	Preference 3
A	X	Y	Z
B	Y	Z	X
C	Z	X	Y
b) Results: Transitive Policy Alternatives			
Voter	Preference 1	Preference 2	Preference 3
A	X	Y	Z
B	Y	Z	X
C	Z	Y	X

In above table, a) illustrates a situation in which majority voting violates the set of conditions necessary for consumer sovereignty to be maintained in collective democratic decision making. Condition 1, the transitivity condition, in particular, is violated, leading to what is known as the impossibility theorem or voting paradox. Since a majority of the voters (two out of three) prefer policies X to Y, Y to Z and Z to X, the result is intransitive or inconsistent in that there is no winner. The sequence in which the voting occurs would determine the final outcome is illogical result. The outcome is arbitrary since either Z, X or Y will win depending on the ordering of the voting sequence. The transitivity occurs because one voter prefers two extreme policies (Z for one library and X for three libraries) over the median or intermediate alternative, Y for two libraries. This is an unlikely position for a voter prefer three libraries as a second choice instead of two libraries.

When it is graphed, the result is twin-peaked preference function for voter C. If voter C behaves in a more rational manner and prefers two libraries as

a second choice, the intransitive problem disappears and the solution becomes determinate. This is depicted in above table by outcome b) with showing a single peaked preference function for voter C. we begin with a pairing of Y versus Z, Y wins over Z and also defeats X. Finally, a pairing Y versus Z finds Z the winner, but Y wins over Z. Thus, Y is the clear cut winner despite the ordering of the voting sequence. These results also indicate budgetary size.

The impossibility theorem of Arrow is criticized on various grounds as follows:

1. Arrow's theorem could not show intensity of public choices of people for public goods.
2. Arrow has depicted a very pessimistic scenario of political process of arriving at fiscal decision, for supplying public goods.
3. We cannot say common voter reveals his preference for public goods through voting only.
4. It is not true that, the government always taken into account public choices for public goods of people while supplying them.
5. Arrow's theory cannot be applied to public goods of heterogeneous in nature.

Even though, Arrow's theorem of public choice is criticized severely, its total importance cannot be discarded. This theorem explains how the government provides public goods to its citizens in a democratic country. Only majority of voting to reveal public preferences for public goods is not sufficient, but consistency in choice is also a must for fiscal decision and social welfare maximization. The noteworthy merit of the theory is, it describes how it is possible to materialize social welfare maximization of the society through supply of public goods by the government.

4.3 PRIVATE PROVISION OF PUBLIC GOODS

In general, the private sector underprovides public goods because of the free rider problem. Private provision of a public good creates a positive externality (as everybody else benefits), Goods with positive externalities are under-supplied by the market.

There are some interesting examples of the free rider problem in practice. Only 7.5% of public radio listeners in New York contribute to the stations—that is, there is a lot of free-riding. In the United Kingdom, the BBC charges an annual licensing fee for all television owners. Many users of file sharing services never contribute for downloading the files; they only download files. Some of these services, give download priority to those who contribute.

Consider two people, Ben and Jerry, and two consumption goods, ice cream and fireworks. Set the prices of each good at \$1, but fireworks are a public good. Assume that Ben and Jerry have identical preferences.

Ben and Jerry benefit equally from a firework. Each person chooses combinations of ice cream and fireworks in which his own MRS equals the ratio of price. For both Ben and Jerry, they set:

$$MRS_{F,IC} = 1, \quad MU_{IC} = MU_F$$

Whereas optimal provision requires:

$$\sum_i MRS_{F,IC}^i = 1$$

With identical preferences, the optimal condition is:

$$2 \left(\frac{MU_F}{MU_{IC}} \right) = 1$$

This implies $MU_F = \frac{MU_{IC}}{2}$

We know that marginal utilities diminish with increasing consumption of a good. In this example, optimal provision would require that fireworks are consumed until their utility equals half the marginal utility of ice cream. Thus, each individual buys too much ice cream privately.

Under what circumstances are private market forces likely to solve the free rider problem?

The free rider problem does not lead to a complete absence of private provision of public goods. Private provision works better when:

1) Some Individuals Care More than Others: Private provision is particularly likely to overcome the free rider problem when individuals are not identical, and when some individuals have an especially high demand for the public good.

2) Altruism: When individuals care about the benefits and costs to others in making their consumption choices.

3) The warm glow: The warm glow model is a model of public good provision in which individuals care about both the total amount of the public good and their particular contributions as well. In this case, the public good becomes more like a private good, though it also does not fully solve the under-provision problems.

4.4 EVALUATION OF GOVERNMENT EXPENDITURE: COST BENEFIT ANALYSIS

The most popular method of project evaluation is to consider the cost benefit analysis of different projects and then to select involving lesser

cost and yielding greater benefit. Cost Benefit Analysis is the comparison of costs and benefits of public goods projects to decide if they should be undertaken.

The role of cost benefit is explained by Prof. Marglin as, **“The perspective and Five year Plans determine the broad strategy of growth by allocating resources among sectors. But the strategy of growth embodied in the Plans leaves many tactical questions unsolved, and it is these tactical decisions that are the province of cost benefit cost analysis.”**

Measuring the effectiveness of the public expenditure is essential in the analysis of the public sector's performance, the efficiency being an indicator of the performance. Cost benefit analysis is a method of measuring the efficiency of public spending. The cost-benefit analysis is an effective tool for making decisions regarding spending the public money in the public sector, but there may be some errors, such as errors of omission, of forecasting, of evaluation and measurement. The quality and accuracy of the Cost Benefit Analysis depends also on the skill and goodwill of the analyst and on the complexity of the project.

It provides superior criteria for project evaluation in planned economy. It helps the planning authority in making correct investment decisions to achieve optimum resource allocation by maximising the difference between present value of benefits and costs of a project.

Thus, cost benefit analysis “describe and quantify the social advantages and disadvantages of a policy in terms of a common monetary unit.” The objective function can be expressed as $\text{Net Social Benefit (NSB)} = \text{Benefits} - \text{Costs}$.

The equality of marginal social costs and benefits means each and every activity of the Government should be extended to that level at which the marginal social benefit from the activity equal marginal social costs. The Marginal Social Benefits (MSB) are the gains to the members of the community as a whole from Government expenditure. Marginal Social Costs (MSC) are taken as the benefits from private sector production which are foregone due to the transfer of resources to the public use. The optimum level of each public activity is attained when MSB, from all activities are equal to one another. The benefits to the society from the last rupee spend on education for instance must be the same as those from the last rupee spent on defence.

General Conditions for Cost Benefit Analysis:

The project selection must be made on cost benefit analysis to formulate optimal development plans. The first step of project evaluation is to consider a list of cost and benefits of a project. It depends upon the nature of the project. The social benefits of a project include the contribution that

the project would make to the attainment of national goals. There are four criteria of Cost-Benefit:

(i) $B-C$

where, B = Benefits

C = Costs In this criterion -

Net Social Benefit = Benefits – Costs

The adoption of the $B-C$ criterion favours a large project and makes small and medium size projects less beneficial. Thus, this criterion helps in determining the scale of project on the basis of the maximisation of the difference between B and C .

(ii) $B-C/I$

where, B = Benefits

C = Costs

I = Direct Investment.

The formula $B-C/I$ is “for determining the total annual returns on a particular investment to the economy as a whole irrespective of to whom these accrue”. If the private investment happens to be very large, then even high value of $B-C/I$ may be less beneficial to the economy. Thus, this criterion is not much useful to achieve satisfactory results.

(iii) $\Delta B/\Delta C$

where, B = Benefits

C = Costs

Δ = Increment

It determines the size of project.

(iv) B/C

The best and most effective criterion for project evaluation is B/C . In this criterion, the evaluation of project is done on the basis of benefit-cost ratio. If $B/C=1$, then the project is marginal because the benefits occurring from the project just cover the costs. If $B/C < 1$, then benefits are less than costs-so the project is rejected. If $B/C > 1$, the benefits are more than costs and the project is profitable and hence, it is selected.

The higher the benefit cost ratio, more profitable will be the project. The criterion discussed above does not account for the time factor. In fact, the future benefits and costs cannot be treated at par with present benefit and cost. Therefore, project evaluation requires discounting of future benefits and costs because society prefers present to the future.

If time factor is considered then criteria for social costs benefits are following:

1) Net Present Value Criterion (NPV):

This is an important criterion for project evaluation.

NPV=Present value of benefit—Present value of operating and maintaining costs—Initial outlay. It is also expressed as the net present value of benefits criterion so that,

NPV of benefit = Gross present value of benefits—Gross present value of costs.

If NPV > 0 then the project is socially profitable. If there are number of mutually exclusive projects, then the project with the highest net present value of benefits will be chosen.

The NPV criterion is not accurate method for project evaluation as it neglects the time horizon. Capital investments give benefits after a lapse of some time. Therefore, future benefits and costs cannot be equated with present benefits and costs. So it becomes essential to discount future benefits and costs because society prefers present to future.

The discount factor is expressed as:

$$D = \frac{1}{(1+i)^t}$$

where i —social discount rate.

t —time period.

Thus

$$NPV = \left[\frac{B_1}{(1+i)^1} + \frac{B_2}{(1+i)^2} + \frac{B_n}{(1+i)^n} \right] - \left[\frac{C_1}{(1+i)^1} + \frac{C_2}{(1+i)^2} + \frac{C_n}{(1+i)^n} \right]$$

$B_1, B_2 \rightarrow B_n$ series of gross present benefits in years 1, 2..... n

$C_1, C_2 \rightarrow C_n$ series of gross present cost in years 1, 2..... n

$i \rightarrow$ social rate of discount.

Only those projects should be selected in which present value of benefits exceeds the present value of costs. The ratio of present value of benefit to present value of cost should be greater than 1 for the selection of a project.

2. The Internal Rate of Return Criterion:

The criterion refers to the percentage rate of return implicit in the flows of benefits and costs of projects. Margin defines the internal rate of return (IRR) as the discount rate at which present value of return minus cost is zero. The mathematical formula for the computation IRR:

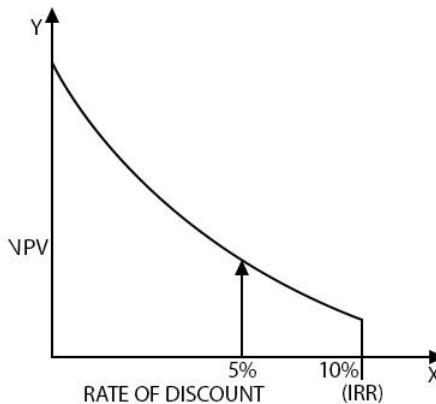
$$B_1 - \frac{C_1}{(1+r)^1} + B_2 - \frac{C_2}{(1+r)^2} + B_n - \frac{C_n}{(1+r)^n} = 0$$

In case of mutually exclusive projects, the project to be selected must have highest rate of return.

Relation between NPV and IRR:

The NPV at the social discount rate and the internal rate of return are two criteria which are frequently used for choosing projects. The relation between NPV and IRR is illustrated with the help of a diagram.

Figure No. 4.2



As NPV falls, the discount rate increases and a situation arises when NPV becomes negative. The rate at which NPV changes from positive to negative is IRR. For the selection of project, the IRR must be higher than its discount rate i.e. $r > i$.

In the above figure, IRR is taken as 10 per cent be selected for development so long as $NPV > 0$ and r (10 per cent) $> i$ (5 per cent). For complex projects, these two criteria can give different results but mostly they are interchangeable.

NPV criterion is commonly used for project evaluation in private and public sectors. But the NPV criterion is technically superior, since IRR can give an incorrect result in special circumstances.

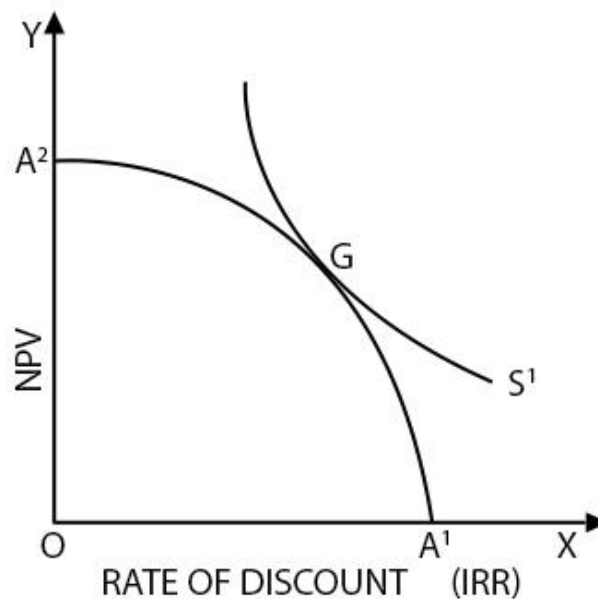
3. Social Rate of Discount (SRD):

Since society prefers present to future, so future generations are likely to have higher levels of income. If the principle of diminishing marginal utility operates, then the utility gains to future generations from a given amount of benefits will be less than the utility gains to the present generations so the future gains must be discounted.

The rate at which future benefits must be discounted to make them comparable with present benefit is called 'Social Rate of Discount'. In other words, it is the rate of premium which the society puts for preferring the present consumption to future consumption.

This is illustrated with the help of a diagram

Figure No. 4.2



The present consumption A_1 is taken along horizontal axis and future consumptions A_2 taken along vertical axis. $A_1 A_2$ is the transformation frontier or investment possibility curve. It consists of a series of projects arranged from right to left in order of their rate of return, the cost of sacrifice of present consumption and the return is the gain of consumption in future.

The society will choose from the various investment possibilities so as to reach its highest social indifference curve SI , The society reaches an optimal position when transformation curve A_1A_2 equals its social indifference curve SI at point G .

The slope of the transformation curves represents the rate of return on investment and the social indifference curve represents the rate of time preference. Thus, social discount rate is determined by the equality of the rate of return on investment and rate of time preference at point G .

If the social discount rate is high, short period projects with higher net benefits are preferred. On the contrary, when the discount rate is low, long period projects with lower net benefits are selected.

Limitations of Cost Benefit Analysis:

Cost benefit analysis is a powerful technique regarding the selection and rejection of project even then it is not free from drawbacks.

1. Difficulties in Benefit Assessment:

The correct estimation of benefits from a project becomes difficult due to uncertainty regarding the future demand and supply of the products from a new project. Another difficulty arises from the existence of external

economies. The presence of external economies may lead to the selling of the product of project at price equal to marginal cost and not equal to average cost which will create a deficit and efforts are made by a special levy on consumers or through budgetary resources.

2. Arbitrary Discount Rate:

The social rate of discount assumed for any project is arbitrary. There is no perfect method to find social discount rate. It remains a subjective phenomenon. But if there is a small change in social discount rate it may change the full results of project evaluation. The arbitrarily large discount rate does not help in calculating the net present value of benefits of long term projects.

3. Ignores Opportunity Cost:

It also ignores the problem of opportunity cost.

4. Problem of Externalities:

The side effects of a project are difficult to calculate in this analysis. There may be technological and pecuniary externalities of a river valley project, such as the effects of flood control measures or a storage dam on the productivity of land at other places in the vicinity.

5. Difficulties in Selecting Appropriate Decision Rules:

There are three decision rules for the evaluation of project. These are NPV criterion, IRR criterion and SRD criterion. All these criteria have their own advantages and disadvantages. Therefore, it becomes difficult to decide as to which criterion should be used for the evaluation of the project because the wrong selection will lead to false conclusions.

6. Difficulties in the Cost Assessment:

Cost estimates are made on the basis of the choice of techniques, locations and prices of factor services used. Market prices of factors of production are used for this purpose provided they reflect opportunity cost.

But in developing countries, market prices usually do not reflect the opportunity costs, because there is fundamental disequilibria which is reflected in the existence of massive under-employment at the prevailing level of wages, the deficiency of funds at prevailing interest rates and the shortage of exchange at current rates of exchange.

The equilibrium level of wage rates will be considerably lower than market wages while equilibrium interest rates will probably be much higher than market rates. To remove this difficulty, the use of 'shadow prices' or 'accounting prices' have been suggested by J. Tinbergen, H.B. Chenery and K.S. Kretchmer. These shadow prices reflect the intrinsic value of factors of production. In the cost benefit analysis, we cannot take the opportunity cost of labour as zero.

7. Neglects Joint Benefits and Costs:

It ignores the problems of joint benefits and costs arising from a project. There are number of direct and indirect benefits flowing from river valley project but is difficult to evaluate and calculate such benefits separately. Similarly, the joint costs that cannot be separated are calculated benefit-wise.

4.5 CONCLUSION

The present unit is devoted to the theory of public choice and Cost-Benefit Analysis. Preference revelation Mechanism is described through two social choice theories, Wicksell approach and Arrow's Impossibility Theorem. There are the number of problems in revealing public choices for public goods by the people. These problems or difficulties are discussed by the theories of public choice. The present unit discusses private provision of public goods and throw some light on circumstances where private provision of public goods can solve the free rider problem. The present unit thoroughly explains one of the most popular theories of public expenditure, that is Cost-Benefit Analysis with its limitations.

4.6 QUESTIONS

- Q1. Explain the Wicksell approach of Public choice theory.
- Q2. Illustrate Arrow's Impossibility theorem of social choice.
- Q3. What is Preference Revelation Mechanism, illustrate through Wicksell approach to reveal Public choice?
- Q4. Explain the private provision of public goods. How the private provision of public goods solves the free rider problem?
- Q5. Evaluate the Cost-Benefit analysis.
- Q6. Explain the Cost-Benefit criteria?
- Q7. How can Government expenditure project be evaluated through Cost-Benefit analysis? Discuss.
- Q8. What are the limitations of Cost-Benefit analysis?

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BASIC CONCEPTS OF TAX AND TAX THEORY

Unit Structure

- 5.0 Objectives
- 5.1 Introduction
- 5.2 Sources of Public Revenue
- 5.3 Meaning of Tax
- 5.4 Features of Tax System
- 5.5 Objectives of Taxation
- 5.6 Canons/Principles of Taxation
- 5.7 Tax Theory
- 5.8 Summary
- 5.9 Questions

5.0 OBJECTIVES

After going through this unit you will be able to

- Understand the meaning of tax and know the features and objectives of tax system.
- Know the sources of public revenue.
- Understand the canons or principles of taxation.
- Explain the theories of taxation.

5.1 INTRODUCTION

The role of government in socio-economic development of the nation is enhancing. Public sectors expenditure is required in both developed as well as developing economies. The theory says that with the progress of economy the size of public expenditure increases. To fulfill the expenditure requirements, government always trying to increase revenue sources. There are three main sources of income in the hand of government. These are taxes, charges/fees and borrowings.

Government of India's finance minister announced the central budget at 1 February 2020. The total budgetary provisional expenditure was 30.42 lakh crore. 22.46 lakh crore were collected from tax revenue and non tax

revenue plus non debt capital. Remaining 8 lakh crore were collected debt to fulfill the public expenses. As the mentioned in budget, tax revenue is the biggest source of government for income.

During the present situation every government tries to increase tax revenue to increase the public expenditure. For that purpose several reforms are being made in taxation system and enhanced taxes to collect more receipt. The government of India was never levied service tax before 1995. Considering the increasing share of service sector in national income service tax started from 1995. Now from 2017, GST (Goods and Service Tax) is being stated to implement and most of services are brought into GST.

5.2 SOURCES OF PUBLIC REVENUE

Sources of public revenue are as tax, fees, profit from public enterprises, fine, grants, donation and betterment tax etc.

1. Tax:

Taxes are the main source of public income. The government withdraw a part of people's income is called tax. There are several types of types. Generally taxes are categorized as direct and indirect taxes. Direct taxed are being paid by the person on whom government levied it and indirect tax are the taxes which are transform from one person to another.

2. Fees:

Fees is the one of income source of government. Government provides several administrative and other services to the people. To consume such services government impose charges on it like educational fees, court fees, health fees, registration fees etc.

3. Profit from Public Enterprises:

Government runs several enterprises in the country with several objectives. It produces certain goods and services. The profit of such industries is the income of government. For example Government runs railway, during the period of rail minister Lalu Prasad Yadav, Indian rail was in profit. This profit is the income of government. There are several industries like navratna, miniratna industries running in profit in India.

4. Fine:

The government of any country establishes rules and regulation for smooth functioning of the society. If somebody crosses the rules and regulations, it imposes the fines. The amount of collected fine is the income source of government but it is imposed to follow the rules of acts. Fine are compulsory to pay if someone crosses the rules and regulations.

5. Grants:

One government gives grants to another government. Like, central government gives grants to state governments and state governments give

grants to local governments. It is being given by one country to another country also.

6. Donations:

Some time at the situation of adverse condition like flood, earthquake, tsunami, Covid19 pandemic government collect donations from the public of nation and state. During the Covid19 pandemic Indian government collect the donation in the account of P.M. care fund.

Every government uses several options to collect income according to the need of public expenditure. Taxes are being imposed by the governments to collect the income. Taxes are the biggest source of public income/revenue. Now we will see the details about taxes, classifications of taxes, principles of taxes and theories of taxes.

5.3 MEANING OF TAX

Tax is the amount of income which is to pay honestly to the government by citizens without any expectation to refund it. It may be levied on property, income, at the time of purchasing any goods and services, selling goods and services. Tax is a compulsory payment to the government by people without any expectation of some return. If the person denies to pay tax it will be punished in the court of law.

According to Adam Smith, “A tax is a contribution from citizens for the support of the state”.

Prof. Seligman: “A tax is a compulsory payment from a person to the government to defray the expenses incurred in the common interests of all without reference to special benefits conferred”.

Taussing: “The essence of a tax as distinguished from other charges by government in the absence of a direct quid pro qua between the tax payer and public authority”.

Bastable: “Tax is a compulsory contribution of the wealth of a person or body of persons for the service of the powers”.

Dr. Dalton: “A tax is a compulsory contribution imposed by a public authority irrespective of the exact amount of service rendered to the taxpayer in return and not imposed as penalty for any legal offence”.

Findlay Shiras: Taxes are compulsory contribution to public authorities to meet the general expenses of the government which have been incurred for the public good and without reference to special benefits.”

Economists have defined the definition of tax. From the above definitions we can conclude that the taxes are in compulsory nature not voluntary nature. It reduces the expendable income of the tax payer and the purchasing power of the public. In the other side public authority expend

the income to promote productive activities from collected through imposing taxes. To levy tax on public, it has also some goal to attain in the economy like to increase employment opportunities, to reduce poverty, to expand infrastructural facilities, to reduce income and regional inequalities etc. The government tries to promote economic stability and growth in the economy through collection of tax.

5.4 FEATURES OF TAX SYSTEM

Important features of tax systems are as following:

1. Tax in a payment to public authority:

The taxes are imposed by public authority on the people. In other word taxes are the payment by the people to the public authority mean government only. If the person pays a specific amount every year to any social welfare society is not called taxes. It is called donation. Taxes are being paid by people to the governments.

2. Tax is compulsory pay:

Taxes are compulsory to pay to the government. Whatever tax rate levied by government it have to pay. For example, if government fixed income tax rate at 10% on above 5 lakh rupees annual income, the person who have more than 5 lakh rupees income have to pay tax on above income. Exception is only when government gives exception.

3. It is sacrifice of income:

People are legally bound to pay taxes to the government from its income. When the people pay the tax amount, the amount of tax is the sacrifice of income by tax payer. At the time of purchasing goods and services, due to indirect taxes on transaction consumer sacrifice extra goods and services due to the tax increases prices of goods and services.

4. Benefit and taxes are independent:

People have to pay taxes not for receive any type of benefit from the tax amount. Government expenditure is for welfare of people but it not fixed that only tax payers are eligible to receive the benefit of government facilities.

5. Kinds of Taxes:

A taxes are in different kinds. Taxes are categories in to two categories these are direct and indirect taxes. Income tax, property tax, wealth tax are the examples of direct taxes. Goods and service tax, service tax, excise duty, sales tax are the indirect taxes.

6. Public welfare is the main aim of taxes:

Levy of taxes is the one of element of the fiscal policy of the government. Government levied taxes with several aims. Public welfare is the common aim has been shown behind every type of tax by the public authority.

7. Legal sanction:

Once a tax levied by the government it became legal sanction. If a person failed to pay taxes is liable to legal punishment. The nation's authority can impose taxes.

5.5 OBJECTIVES OF TAXATION

The main objectives of taxation are as follows.

1. To raise public revenue:

The main objective of taxation is to raise public revenue to meet ever increasing public expenditure. To achieve the goal of welfare state, every government has to increase the public expenditure with growth of economy. The government always tries to promote economic development of the economy and secure nation from external as well as internal enemies of the society. To maintain such aim it requires revenue which has been tried to bring from taxes by the government.

2. To reduce inequalities in income and wealth:

Developing countries are suffering from the problem of income and wealth inequalities. Inequalities are not good for the development of country. So, the government tries to reduce inequalities to maintain equality in society. For that purpose, direct Tax is one of the elements through government can reduce the gap of inequality between rich and poor.

3. To regulate the economy:

It is one of the main objectives of the taxes. Government regulates consumption, production, import and export of the country through taxes. There are several products which are harmful to the health of society. Government increased taxes on such productions and tries to decrease consumptions of such products like, cigar, tobacco, alcohol etc. The government imposes import and export duties to protect local industries. On the other hand some time export duties are being levied by the government to stop certain goods and services which necessary goods have scarce in the country. In overall taxes are being imposed by the government to regulate the economic transactions to the development of country.

4. To Increase National Income:

It is the objective of taxation to increase national income with increase of per capita income. Government collected revenue from taxes to use it productive purposes. It leads to increase national income of the country and enhance employment opportunities. High growth rate of national income indicates progressive nation.

6. To established economic stability:

Economy faces trade cycles in certain situations. Now a days of globalization, other countries trade cycles are affecting our countries

economy like financial crises of 2008 in the America. To established economic stability in the economy both monetary and fiscal policies are being used. Economic stability consists by maintaining price level, maintaining full employment and adequate foreign currency. To control inflation and deflation government uses taxes as the measure to correct it. Government expends collected tax revenue to run employment generation programs like MNREGA in India.

7. Proper Standard:

It is another objective of taxation. According to A.P.Lerner, “Taxes should not be imposed simply because the government needs money. Economic transactions should be taxed only when it is thought desirable to discourage these transactions. Individuals should be taxed only when it is desirable to make the tax-payer poorer.”

8. To Promote Capital Formation:

In underdeveloped and developing countries, promotion of capital formation is main objectives of capital formation. The Government invests money from collection of tax in Independent investment which promotes private investors to increase induced investment. It leads to promote capital formation in the country.

9. Political Objectives:

To attaining political objective in the democratic country, taxes are being used as weapon. The middle class and poor people of a country are being happy when the government imposing high rate of taxes on rich people. It gives high revenue with political profit to the ruling governments.

5.6 CANONS/PRINCIPLES OF TAXATION

Tax is the source of public revenue for the every government in the modern age. If taxes are increases government revenue also increased and vice-versa. Every government has to expenditure more to fulfill the public needs and develop the country. But, at the other side additional burden of taxes on the tax payer effect adverse on the productivity of producer means taxpayer. It became certain responsibility of government at the time of imposes taxes on tax payer to keep their condition in the mind and levy accessible taxes. As we saw in the objectives of taxes, taxes should not adverse impact on the efficiency and productivity of the tax payer.

It is the big question before policy makers as how the taxes can be levied and what should be the pattern of taxes. At the time of every new tax imposition it should be seen that the capacity to pay the taxes, no discrimination and positive impact on the economy. Economists have suggested various canons/principles of about taxation. The canons of taxation are time to time suggested by economists for good taxation policy. There are no exact canons of taxation.

A. Adam Smith's Canons of Taxation:

Findlay Shiras commented on contribution of Adam Smith as; "No genius, however, has succeeded in considering the principles into such clear and simple canons as has Adam Smith." Smith was the first writer to give a detailed and comprehensive statement of the canons of taxation. Adam Smith stated four canons of taxation these accepted universally.

- 1) Canon of Equality
- 2) Canon of Certainty
- 3) Canon of Economy
- 4) Canon of Convenience

1. Canon of Equality:

It is the base of good tax system. It is said that a good tax is that tax which is based on the principle of equality. This canon means the tax should be levied according to the paying capacity of the individual. Adam Smith explained it as, "The subject of every state ought to contribute towards the support of the government as nearly as possible, in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of state."

The principle states that the rich people must be subjected to higher taxation compare to the poor. In short Adam Smith stressed that everyone should pay according to his ability to pay. It is on the base of equality because the rich person has low marginal utility to money and poor has greater marginal utility to money. Both of them should sacrifice equally.

2. Canon of Certainty:

There should not be confusion about the payment of tax. According to Adam Smith, "The tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, all ought to be clear and plain to the contributor of the tax."

In other words the time of payment, amount to be paid, method of payment. The place of payment and the authority to which tax is paid should certain. The certainty creates confidence and easier to tax payer to manage and pay taxes.

3. Canon of Convenience:

Adam Smith quotes, "Every tax ought to be levied at the time or in the manner in which it is most likely to be convenient for the contributor to pay." Taxes should be levied in such manner which provides the maximum of convenience to the tax payers not inconvenience to the tax payer. For example, income tax from the salaried person should be collected at the time of salary. Land revenue should be collected at the harvest time which is convenience to the tax payer. It becomes convenient to the tax payers and tax collecting authority also. At one time tax amount would be collected with low cost of collection.

4. Canon of Economy:

It means the cost of tax collection should be minimum means negligible. The maximum amount of tax collection should be deposited in the government treasury. Thus, other extra expenses should be avoided in the process of tax collection. Objectives of tax collection would be fulfilling if the principle of economy followed during tax collection strictly. In other words maximum tax collection should be done with minimum expenditure on tax collection. It increases productivity of taxes.

All of above canon of taxation are significant and have important place in every financial structure. Importance of these canons has been described by the Prof. Shiras as, "Today Adam Smith canons continued to be regarded as almost an essential part of the study of finance and they have had a considerable effect on practical finances."

B. Other Canon of Taxation:

Other than Adam Smith canon of taxation there is other canon of taxation as following.

- 1) Canon of Productivity.
- 2) Canon of Elasticity.
- 3) Canon of Simplicity.
- 4) Canon of Neutrality.
- 5) Canon of Variety.
- 6) Canon of Expediency.
- 7) Canon of Co-ordination.

1. Canon of Productivity:

In the word of Prof. Bastable, "The canon of taxation must be based on the productive lines. Taxation is believed to accumulate enough money for the government to run its administration efficiently. It must be enough to enable the government to secure enough facilities for the people." Productive taxes help to government to collect more amount taxes with least expenditure on with it, there are no unfavorable effect on the saving potential of the people.

2. Canon of Elasticity:

Canon of elasticity means taxes should be levied in such manner that when taxes became inconvenience to the tax payer it should be decreased. At the time adverse circumstances government could be levied more taxes meet the need of emergency.

3. Canon of Simplicity:

Each and every tax should be simple, easy and understandable to the common people. If the tax system is complicated, tax payers seek assistance of tax experts and they lost extra money on the assistance of tax experts. Government should make the simple rules and regulations of tax system.

4. Canon of Neutrality:

Taxes should be neutral means it must have not any inflationary and deflationary effect on the economy.

5. Canon of Variety:

There should be proper mixture of direct and indirect taxes. The burden of paying tax should not centralize on one group of people but it should be diversified in such a way all people should pay the tax according to their ability to pay.

6. Canon of Expediency:

The tax payers should have no doubt about tax desirability. At the time of imposition of taxes it should be seen favorable and unfavorable effect of taxes from the view of point of social, economic and political.

7. Canon of Co-ordination:

There should be co-ordination between various taxes and various taxes imposing authorities. If there is absence of coordination, over and double tax will be levied which will be inconvenience to the tax payers.

The good taxation policy requires the canon of taxes implemented in the tax system. But actually there is no country in the world where all canons are fulfilling by tax system. Taxes should be best good effects and least bad effects on the economy and tax payers.

5.7 TAX THEORY

5.7.1 Ability to Pay:

Ability to principle is widely accepted for securing the justice of equity taxation. Tax has been to pay according to his ability to pay. It is based on the posses of income and property to the person. If the person posses more income property, it should be pay more and vice versa. First of all Italian Economist GrikiArdini have presented progressive tax principle on the base of ability pay. Bodin, Sismodi, J.S.Mill, Rosusseau, Wagner, Roosevelt and Adam Smith also accepted the principle of ability pay taxes.

According to ability to pay theory, the person should pay as it can bear of able to pay tax. If the person has more ability to pay, it has to pay more and if less ability to pay should be pay less. This principle works with the diminishing marginal utility of money. The rich person has less marginal utility of money. So it will pay more but not sacrifice less and poor person pay less taxes but sacrifice more because poor person has more marginal utility of money.

The ability to pay principle is based on three main grounds.

a. Equal Sacrifice:

According to J. S. Mill, “What would be more equitable than a situation under which each person’s contribution to the support of government resulted in equal sacrifice for all.” It means, the sacrifice of each tax payer should be equal.

b. Law of Diminishing Marginal Utility of Income:

With every increase of income, marginal utility of money decreases. In other side if income is decreased marginal utility of money increases. It implies to make tax burden equally, the rich one should be taxed heavily compare to poor person. The absolute poor person should be exempted from taxation. This concept of diminishing marginal utility of money derived from the general diminishing marginal utility.

c. Interpretation of Faculty:

According to Prof. Hubson, “Economic surplus is the part of income which can bear the tax burden. With the increasing faculty, the economic surplus also increases and inviting more in proportion to the increases and inviting more in proportion to the increase in income and wealth, as the level of economic surplus is increased. ” As the tendency of individual, after completion of certain needs certain resources are left which is also known as economic surplus. It gives more ability pay more.

Determinants of Ability to pay:**i. Property:**

Property is the one of the best determinants of the ability to pay. In general sense we can say that if a person have more property, it has more ability to pay. Property is the important source of the income. But all type of properties never gains income. There several possibilities about property. The income from property does not flow continuously; income from property may vary from place to place. The property is taxed according to its capital value and if the property does not yield any income, it would be unfair to tax it. In short property is not main index of ability to pay but supplementary.

ii. Income:

Property or wealth is the stock concept and income is a flow concept. Ability to pay tax is on the base of flow concept. So, income is became the main determinants of ability to pay. If a person has more income, it pursues more ability to pay and vice versa. Subsistence income should be exempted from the taxes because it requires living a life. The net income above subsistence income is main determinants of ability to pay taxes.

iii. Size of the Family:

Size of family is affecting the ability to pay of tax payers. A large family with a fix amount of income can have less ability to pay and the small family with same income would be more ability to pay taxes. The size of family should be taken on account at the time of levying taxes according to

the principle of ability to pay. But yet this index is being not implemented in practice.

iv. Consumption Expenditure:

According to Prof. Kaldor, “Consumption rather than income should be the basis of taxation.” Consumption measures the person who actually withdraws the resources from the economy for its personal use. Some developing countries are imposing expenditure tax and some are imposing excess tax on luxury goods.

Subjective Approach to Measures of Ability to Pay Taxes:

There are three interpretations of equal sacrifice as follow.

- a. Equal Absolute Sacrifice.
- b. Equal Proportional Sacrifice.
- c. Equal Marginal Sacrifice.

a. Equal Absolute Sacrifice:

Equal absolute sacrifice implies that the total loss of utility sacrifice should be equal for all tax payers belonging to different income groups. It means rich person should pay higher taxes and comparatively poor person should pay less tax. Actually the rate taxes should depend on the marginal utility of income of tax payers. This type of taxes are called progressive tax system. A.C.Pigou agreed that it was justified to adopt higher degree of progressive in case of higher income group.

With the help of formula;

$$\{U(Y) - U(Y - T)\}R = \{U(Y) - U(Y - T)\}P$$

Whereas;

U = Utility of Income

Y = Income

T = Tax

R = Person first

P = Person Second

The absolute amount of utility of money lost as a result of tax payment should be equal to everybody. If we assume there are two persons paying tax in the community R and P, equal amount of sacrifice though both are different income group.

b. Equal Proportional Sacrifice:

It implies that the loss of utility for taxpaying should be proportional to the total income to the tax payer. In that sense, higher income group tax payers will pay more than lower income group. But, the ratio of sacrifice to their income will be same for all groups of income.

It can be expressed in mathematical term as;

Rate of Tax = Sacrifice of tax payer X / Total Income of X = Sacrifice of tax payer Y / Total Income of Y

It is possible in the progressive taxes. The proportion of sacrifice should be equal in all income groups of tax payers.

c. Equal Marginal Sacrifice:

According to Musgrave, “It is the ultimate principle of taxation.” This principle is also called as ‘least aggregate sacrifice principle. According to this principle, the total sacrifice by all taxpayers should be lowest.

Explanation with the help of formula as;

$$Mu (Y-T)_R = Mu (Y-T)_P$$

Formula shows;

Mu = Marginal Utility of Income

R = One tax payer

P = Second tax payer

Y = Income

T = Tax

It shows the marginal sacrifice for the different tax-payers should be the same. Aggregate sacrifice for the all income groups of the community should be the least.

Limitations of Subjective Approach:

- 1) The counting of equality in marginal sacrifice of all income groups is very difficult. To every individual is differs about taste, temperament and attitude to pay taxes.
- 2) Sacrifice is a subjective phenomenon so that it is not easy to measure exactly by tax imposing public authority.
- 3) Measurement of declining marginal utility of income is not possible in practice.
- 4) Marginal Utility varies with each type of income. Marginal utility of the income earned from property is lesser than the income earned by person from own work.
- 5) Subjective approach of utility and sacrifice is only an ideal approach. It ignores reality of practical life.
- 6) Professor Musgrave found that, “It remains to be seen whether a workable and reasonable meaningful measure of utility, can be developed in time and whether, thereby the subjective concept of ability to pay can be given an operational meaning.”

Finding out such difficulties in subjective approach, some economists have suggested alternative approach that is an objective approach to measure the ability to pay of tax payers. Prof. Seligman used term

‘faculty’ to introduce ability to pay in objective term. This approach also has some limitations because objective approach is based on the principle of regressive tax pattern.

Merits of Ability to Pay Theory:

Merits of ability to theory are as following;

1. Natural Justice:

It is the natural thing that the person who poses more income has to pay more and who is poor unable to pay tax. This theory applies the same thing at the time levy of taxes. In that sense the theory of ability to pay make justice naturally.

2. Horizontal and Vertical Equity:

Horizontal and vertical equity is being satisfied by this theory. Horizontal equity means equal tax to equal ability groups. The vertical equity means unequal treatment to unequal ability to pay groups. High income group have high ability to pay and low income group have low ability to pay. The tax according to this theory maintains both types of equity.

3. Income Inequality Reduces:

Taxes according to ability to pay theory, helps to reduce income inequality in developing economies. It takes larger amount of tax payment from rich income group and the poor whose income is less than resistance gives excuse in tax paying. It reduces some level of income inequalities.

4. Merits of progressive tax:

Ability to pay theory is on the base of progressive tax system. Automatically the merits of progressive taxes are comes with this theory.

5. Achievement of social justice:

Social justice is being achieved with the help of this theory of taxation, it refers high tax rate on high income group and the poorest people are not only exempted from it but also provided several subsidies for resistance.

Demerits of Ability to Pay:

1. Base on Wrong Assumption:

The base of this theory is on equal sacrifice and equal sacrifice is depending on cardinal approach of utility which is subjective which is unable to count practically. Utility is a state of mind and depends on psychological and other.

2. Unclear Theory.

There is no conclusive definition of ability to pay principle or equal sacrifice principle. Equal sacrifice has three interpretations these are equal absolute sacrifice, equal proportional sacrifice and equal marginal

sacrifice. Nobody can say which one is purely scientific approach to count equal sacrifice.

3. This theory is unable to cover indirect taxes.

Income is the basic index of this theory. Income index is related to direct taxes but indirect taxes like income sales tax, GST etc. are being implemented without the principle of ability to pay. Whether the purchaser is rich or poor both have to pay same tax. It makes unequal sacrifice.

4. Utility is personal.

This theory is based on equal sacrifice rule. Sacrifice means utility of income is differ with every individual. Because, each person is differ from each other in respect to physically, mentally or emotionally.

5.8 SUMMARY

Although there several demerits of ability to pay theory, it is more applicable and progressive system to follow the rule of equality. It helps economy to reduce income inequality. Direct taxes are being levied in the most of countries according to this ability to pay theory.

5.9 QUESTIONS

1. What are the sources of public revenue?
2. Give the definition of tax and explain the features of tax system.
3. What is the meaning of tax ? What are the objectives of taxation?
4. Explain the canons of taxation given by Adam Smith?
5. Explain other canons of taxation?
6. What is ability to pay approach? Explain the determinant of ability to pay.
7. What are the merits and demerits of Ability to pay theory?

TAXATION AND IMPLICATIONS

Unit Structure

- 6.0 Objectives
- 6.1 Introduction
- 6.2 Direct and Indirect Taxes
- 6.3 Choice between Direct and Indirect Taxes
- 6.4 Taxation and Labour Supply
- 6.5 Horizontal and Vertical Equity
- 6.6 Equity and Efficiency
- 6.7 Public Sector Pricing
- 6.8 Income Tax
- 6.9 Corporation Tax
- 6.10 Expenditure Tax
- 6.11 Commodity Taxation
- 6.12 Tax Evasion and Tax Avoidance
- 6.13 Effects of Tax Avoidance and Evasion
- 6.14 Punishments provision in tax law
- 6.15 Summary
- 6.16 Questions

6.0 OBJECTIVES

1. To study the concepts of direct and indirect taxes.
2. To study the income tax, corporation tax, expenditure tax, commodity taxation.
3. To study the difference between tax evasion and tax avoidance and to study the effects of tax avoidance and evasion.
4. To study the horizontal equity and vertical equity.

6.1 INTRODUCTION

Taxes are various types are being levied in various countries. Even in a single country to fulfill the canons of taxation several taxes are being levied by the tax authority. These are basically categories in to two parts; direct tax and indirect tax. Income taxes are come under direct taxation and commodity taxes comes under indirect taxes. There several positive as well as negative impacts of these taxes on individuals as well as society and sectors of economy. This part of the schedule is about discussion of

types of taxes its implications in India and effects of it on the sectors of economy.

6.2 DIRECT AND INDIRECT TAXES

According to Prof. Dalton, “A direct tax is really paid by a person on whom it is legally imposed, while an indirect tax is imposed on one person, but paid partly or wholly by another, owing to consequential change in the terms of some contract or bargaining between them.” Thus, direct tax is not shifted to another while indirect taxes are the tax which is being shifted to pay by another partly or wholly. Income tax and property tax are the examples of direct taxes. Excise duties, Sales tax, GST are the examples of indirect taxes.

J.S.Mill clearly define the distinction between direct and indirect taxes as, “A direct tax is one, demanded from the very person who is intended or desired should pay it. Indirect taxes are those which are demanded from one person in the expectation and intention that he shall identify himself at the expenses of another.”

Thus, it defines that, direct taxes are actually paid by the person on whom taxes are imposed. Indirect taxes are imposed on one person and it has been paid partially or wholly by another person. Income tax, property taxes are the direct taxes paid by the same person on whom these taxes are imposed. Excise duty, Sales tax, Goods and Service tax are the examples of indirect taxes imposed on one person and paid by another person wholly or partially. The burdens of indirect taxes are shifted by manufacturer or seller to the consumer. Indirect taxes are also called tax burden shifting taxes.

Prof. D. Macro explained it as “Direct taxes are those taxes which affect the income of taxpayer when it receives such income whereas indirect taxes are those taxes which affect the individual consumption and transfer of property. Indirect taxes affect the income at the time when the consumer goes to buy goods.”

6.2.1 Direct Tax:

Direct tax is a tax that a person or institution pays directly to the entity that imposed it.

According to Prof. Dalton, “The direct tax is a tax which is really paid by a person on whom it is legally imposed.”

Merits of Direct Taxes:

Following are the merits of direct tax:

1. Direct taxes are economical. Cost of collecting of these taxes for authority is relatively lower.
2. Direct taxes are easy to follow progressive principle which directed by the principle of equity.
3. Direct taxes are useful to decrease income inequality from the economy.
4. Certainty. Direct taxes satisfy the principle of certainty.
5. Elastic. Tax amount increase with increases of tax rate. Direct taxes fulfill canon of elasticity. If income increases, tax amount also increase and vice versa.
6. Awareness among people. People are well aware about paying taxes. This is not applying for indirect taxes.
7. Easy to understand. The direct taxes are easy to understand even to leman.
8. Civic Consciousness. Direct taxes create civic consciousness among the masses. People became aware about their rights.

Demerits of Direct Taxes:

Following are the demerits of direct taxes.

1. Unpopular tax. Direct taxes are imposed collected directly from tax payer. It appears quite painful to the tax payers. So, it is unpopular in the public.
2. Inconvenience tax. It is found that direct taxes are requiring numerous accounting and other formalities.
3. Uneconomical Tax. If there are number of taxpayer with comparatively low income, with high cost to collection of less tax amount. To collect the taxes, it requires more staff and machinery which means unproductive cost of authority is high.
4. Chances of tax evasion. There is possibility of tax evasion because people are not always ready to government without any earning on it. The tax payer sees directly its sacrifice and do not ready to sacrifice the income which was earn with hard work.
5. Uncertainty in tax. Sometimes there is uncertainty with direct taxes. For example from 2020 in India, The person who is earning more than 5 lakh rupees should pay 5% income tax on the amount between 2.5 lakh to 5 lakh. If the person has less than 5 lakh Rs. Annual income have no tax. Such uncertainty is being made by different governments.
6. Big obstacle to capital formation. Heavy direct tax effect adversely on capital formation in the economy. Specifically in developing economy it becomes big obstacles to capital formation.

7. **Narrow scope.** Direct taxes are unsuccessful to bring civil consciousness among all people because it levied only on certain income groups of society.
8. **Political Interest.** For the political interest, government tries to levy heavy taxes on rich people and exempt poor people to show the government is with poor and middle class people and against of rich people for voting gain.

6.2.2 Indirect Tax:

According to A. R. Prest, “Indirect tax is a termed as indirect, custom duties, excise duties, stamp duties is the indirect taxes.”

According to J.S. Mill, “Indirect taxes are those which are demanded from one person in the expectation and intention that he shall identify himself at the expenses of another.”

In other words, “Indirect taxes are taxes which are collected indirectly from the tax payers. These are levy on one person and shifted to pay to other person are called indirect taxes.”

Merits of Indirect Taxes:

There are some merits of indirect taxes explained as following:

- 1) **Convenient:** Indirect taxes are distributed in small intalment which are convenient to pay. These are included in the price of goods and services and paid by tax payers without feeling any sacrifice.
- 2) **Elastic:** Indirect taxes are highly elastic because if government requires extra revenue can be collect from increasing indirect taxes without becoming unpopular in society. Specifically by increasing taxes on inelastic demand goods and service. Like Government of India increases taxes on petroleum products during COVID19 period also.
- 3) **Less possibility of tax evasion:** About indirect taxes, tax evasion is impossible because indirect taxes are already included in the price of commodity which being purchased by customer.
- 4) **It achieves aim of social welfare:** Reduction of unhealthy goods is good for the welfare of society. Heavy taxes on such products increases prices of such products and the consumption such products reduces.
- 5) **Progressive in Nature:** Sometimes indirect taxes are become progressive in nature. When government levy high rate of taxes on luxurious goods which are purchased only rich people.
- 6) **Easy to collect:** Generally indirect taxes are easy to collect because these taxes are included in the price of commodity. These are collected from producer or seller collectively.

Demerits of Indirect Taxes:

Following are the demerits of indirect taxes found in reality these are as:

- 1) **Regressive:** Indirect taxes are regressive in nature. The same rate of indirect taxes is being paid by rich and poor person. It shows high level of sacrifice of poor one and lower income sacrifice by rich one.
- 2) **Uncertainty in Tax Revenue:** When indirect tax is levied on goods and services prices of goods and services rises and demand decreased. It is very difficult to anticipate the tax revenue about indirect taxes when the demand of good is highly elastic.
- 3) **Absence of Civil Consciousness.** About indirect taxes, the consumer unable to feel or see about burden of tax. Generally tax payer fail to see irregularities of taxes imposes on him about indirect taxes.
- 4) **Indirect Taxes are Inflationary:** When indirect taxes are levied on the goods and services price level of goods and prices tends to increase. In that sense indirect taxes are inflationary nature.
- 5) **Unpopular:** Sometimes the sellers are hike prices of products with the name of increases in indirect taxes. So, it became unpopular in public.
- 6) **Inequitable:** Indirect taxes are more inequitable because about indirect taxes poor person pays more proportion of its income and rich person pays less proportion of its income.
- 7) **Discourage Savings:** Due to indirect taxes, people have to pay more on the purchase of necessary goods and services. It forces to save less than before indirect taxation.

6.3 CHOICE BETWEEN DIRECT AND INDIRECT TAXES

There are some merits and demerits of both direct and indirect taxes. The question comes before the government to which tax to levy for less inconvenience to people and collect high level of revenue. In fact, both types of taxes are supplementary to each other. Most of the countries are levied both types of taxes.

Direct tax is specifically levy on the income of a person. There is a matter about the requirement of minimum income for necessary consumption. Income tax can be paid by tax payer only on above the income of required basic expenditure. In the developing countries; very people can pay the income tax. In such situation indirect taxes are useful to collect more revenue which are being paid by all those purchase the goods and services. Almost all the counties are levied both types of taxes in their countries.

6.4 TAXATION AND LABOUR SUPPLY

6.4.1 Taxation and supply of Resource:

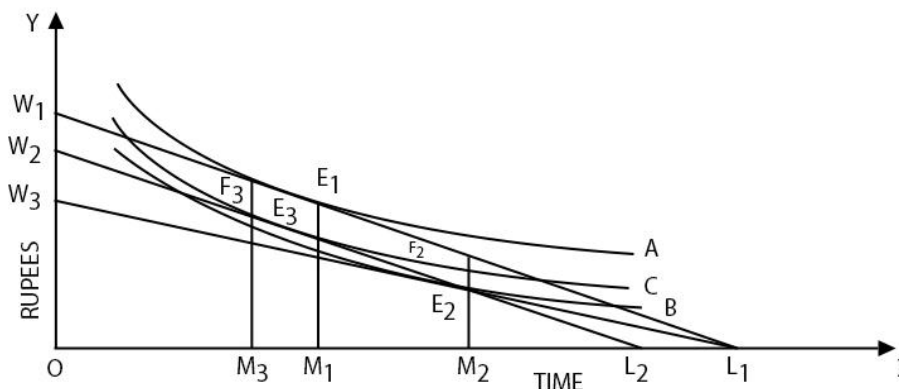
Several types of resources involve in the process of goods and services production. These factors determine the state of growth and development of the economy. Supply of land, labour, capital, Manager and raw material are the resources or factors of production. Tax policy affects the supply of these resources. In terms of land, it is natural source but held by a person and made available on rent. If government levied tax on rent of land the supply of land affects. There are number of long term forces determine the total labour supply and its productivity. About the source of capital, if tax levied on the interest the supply of capital is affected. In the modern era, manager plays key role in the production process while tax on the salary or profit will affect supply of it.

6.4.2 Effect of taxation on labour supply:

The effect of taxation on labour supply is being seen through choice between work and leisure by given labour force. To see this effect the theory assumes there is a typical worker, who has an option to choose the length of working day. It is also assumed that wages are on time rate basis. It means longer working hours more wages income but less leisure.

Choice of our assumed worker between work and leisure has been presented in the diagram 6.1

Figure No. 6.1

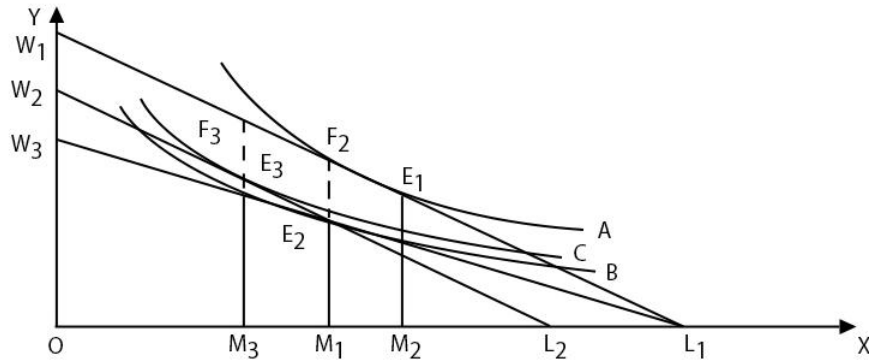


Hours of leisure and work have been measured along horizontal OX axis and the earnings measured along vertical axis OY. The per hour wage rate is Rs. $OW_1/OL_1 = OW_1/24$ per hour. Indifference curves have been drawn with leisure and income/work. The workers choose any one combination on the earning opportunity line W_1L_1 . There is an equilibrium point at E where earning opportunity line connects to the indifference curve A. There are leisure OM_1 hours, and work is E_1L_1 and daily income of this supply of labour is Rs. E_1M_1 . At the time of no taxes, marginal rate of substitution between leisure and earnings is equal to the wage rate at equilibrium E_1 point.

6.4.3 Specific tax and Supply of Labour:

If the government levied a specific tax like poll tax on the income of worker, the workers try to maintain previous income minimum for giving the taxes. Worker tries to reduce leisure and work more. The diagram 6.2 introduces about the effects of tax on choice of leisure and earning hours.

Figure No. 6.2



In the diagram 6.2 earning opportunity line shifts from W_1L_1 to W_2L_2 which shows reduction of earnings of worker. The worker reduces its leisure from OM_1 to OM_3 it results increase of working hours from M_1L_1 to M_3L_1 . Now worker out of his total earning $F_3 M_1$ he pays F_3E_3 for tax.

6.4.4 Progressive Income Tax and Labour Supply;

With increasing marginal and average income workers, tax rate is increasing is called progressive tax. There is an adverse effect found on labour supply of progressive tax. Once worker knew about high earning has to pay more taxes workers prefer for more leisure and less work. If the wage rate increases with progressive tax, workers work lesser than before and prefer more leisure to avoid paying tax.

6.4.5 Proportional Income Tax and Labour Supply:

Proportion tax is the tax which is equal to the all income group tax payers. Proportional tax causes both substitution and income effects. The substitution effect is it became relatively cheaper leisure on costlier earnings. It would tend to increase leisure and reduce labour supply. With proportion tax a new equilibrium point will push to the point E_2 shown on diagram 02.2.

6.4.6 Indirect Taxes and Supply of Labour:

Almost indirect taxes are included in the price of product whether it will be goods or services. It does not effect on the money earning of the workers but it effects on the real income of the person. When government imposes indirect taxes or increases the rate of indirect taxes, the real income of workers is reduced. To maintain the previous consumption expenditure workers tries to increase work hours and decrease hours of leisure if there is no scope of increase earning automatically.

Sometimes increase in indirect taxes effect adversely on the consumption of the workers. Workers shifts from high quality goods to low quality

goods or sometime it stop the consumption of such goods for preferring leisure. Direct effect is being seen of direct taxes but effects of indirect taxes are seen in long time indirectly on consumption expenditure.

6.5 HORIZONTAL AND VERTICAL EQUITY

6.5.1 Horizontal Equity:

Horizontal equity in taxation related to the equal treatment of people on the ground of equal economical position. In simple word, equal tax rate should be levied on equal income group of people. For instance, income tax is progressive in manner but it has a principle of horizontal equity. But for the principle of efficiency horizontal equity has been given second preference. for example, the labour supply of second earner in the family that means women or children gives some concession in taxes even equal payment as the man of family. Women are exempted certain more amount from income tax than male.

The authority needs to find out set of taxes which may meet the requirement of efficiency and with horizontal equity objects.

Horizontal equity has several interpretations as mentioned below;

- 1) Every citizen of country should pay equal taxes.
- 2) Those benefited equally by public expenditure should pay equal taxes.
- 3) Equal taxes should be bear by all tax payers with equal abilities.

Above three interpretations are not found relevantly. Principle of horizontal equity faces certain drawbacks as follows.

- 1) It is difficult in present era to put this principle into operation as ability to pay cannot be determined.
- 2) There is a difference in cost of living in rural and urban area even in different part of the nation. In such situation, horizontal equity will panic to the tax payers who live in expensive area.
- 3) A difficulty arises to bring horizontal equity in time span.
- 4) Principle of horizontal equity also faced problem when tax payers have uneven flows of income tax rates are not proportional.

6.5.2 Vertical Equity:

Vertical equity relates to the share of tax bear by rich and poor person differently. It is a principle help to bring income equality in the society. Specifically vertical equity refers to the principle of ability to pay taxes. Those have more ability to pay should pay more than the people of less ability to pay. But with this principle efficiency of working person affected. By nature more working person gets more income. If authority imposes high taxes on maximum working people and tax exemption to the no working people, it would difficult to increase the national income of

the economy. Vertical equity approach damages the efficiency of work of the person. The person prefer for not to work more and pay less.

For example in India, There is an income tax on above the income of 5 lakh from the year 2019-20 and no income tax if the person has annual income 5 lakh Rs or below it. It is good but if a person earn 1000 Rs. More than 5 lakh Rs. It should pay 5% of income tax on 2.5 lakh Rs. Outoff 5 lakh income and 10% income tax on 1000 Rs. Earn by him by doing extra work. In that condition, instead to pay 12700 Rs tax by doing extra work, it will prefer to earn less than 5 lakh Rs. This type of tax is useful to follow principle of vertical equity but it harms efficiency of work and effect badly on the national income also.

The principle of vertical equity is not conducive to determine the structure of tax rates. It mentions simply that the rich person should pay higher taxes than poor. It refers to progressive taxes. Proportional taxes are taxed equal proportion on everybody's income which relates more to horizontal equity. This is depended on interpersonal comparison of utility of income. New welfare economics has discarded the concept of interpersonal comparison of utility of sacrifice.

This principle is most suitable on political grounds. In case of higher degree of inequality in the distribution of income and wealth, practice of progressive taxation is perfectly fitted on socio-political basis. The progressive taxation has been accepted by widely to levy high rate on rich than poor.

6.6 EQUITY AND EFFICIENCY

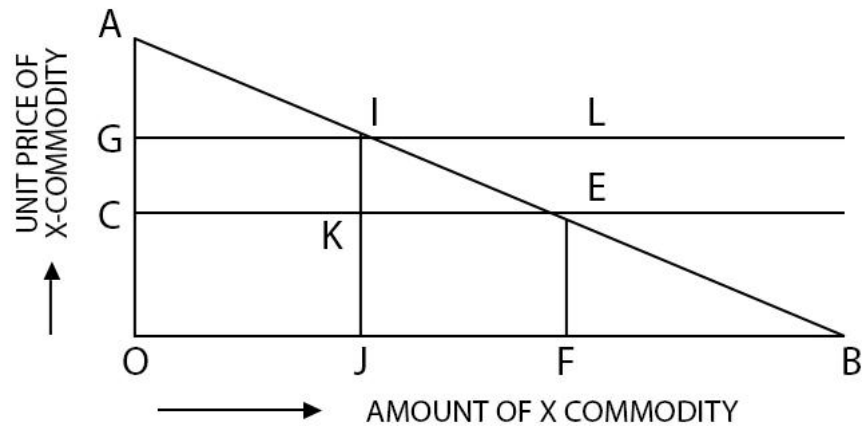
To achieve equity principle at the time of imposing tax burden is the social objectives of the government. It is always try to achieve this. Because, tax is a sacrifice of satisfaction of people and it should be minimum and equal. Less tax burden is the ideal taxation system. But the issue of less burden and is associated with the problem of conflict between equity and efficiency. There is two type of equity principle as horizontal equity and vertical equity as we studied earlier.

The second principle is efficiency, which requires imposing more tax burden to collect more revenue by low cost. But, the issue of excess burden and is associated with the problem of conflict between efficiency and equity.

Ursula Hick concludes, "The excess burden varies directly with elasticity of supply and demand of the taxed product or factor. The assumption is the perfect competition prevails and that there are no closely related products or factors that partial equilibrium is justified, and that the marginal utility of money may be taken to be constant and the demand curve looked upon as marginal utility curve."

Excess burden and loss of consumer surplus has been shown in figure no. 6.3

Figure No. 6.3



In figure no. 6.3, Amount of commodity demand has shown on OX axis and unit price of commodity shown on OY axis. AB is utility cum demand curve downward sloping from left to right. OC is being assumed constant cost of the product. The CG on the OY axis is unit tax which loss of consumer surplus. When tax burden impose on the product the price of product tends to increase from OC to OG. Due to price increases, demand of commodity also decreases from OF to OJ and consumer surplus loss by IEK.

Explained as;

Loss of consumer surplus = IEK.

$IEK = \frac{1}{2} IKEL = \frac{1}{2} KE.KI$

Tax revenue collection = CGIK = KC.KI

$$\frac{\text{Loss of consumer surplus}}{\text{Tax revenue collected}} = \frac{\frac{1}{2} KE.KI}{KC.KI} = \frac{1}{2} \frac{KE}{KC}$$

Elasticity of Demand (E_d) = $\frac{KE/KC}{KI/IJ}$

$$\square \quad Ed. \frac{KI}{IJ} = \frac{KE}{KC} \text{ or } \frac{1}{2} \frac{KE}{KC} = \frac{1}{2} Ed. \frac{KI}{IJ}$$

$$\square \quad \frac{\text{Loss of Consumer Surplus}}{\text{Revenue Collected}} = \frac{1}{2} Ed. \frac{\text{Revenue Collected}}{\text{Amount Spent}}$$

Or

$$\text{Loss of Consumer Surplus} = \frac{1}{2} Ed. \frac{\text{Revenue Collected}}{\text{Amount Spent}}$$

According to Prof. Musgrave, "Society must ask itself what price, in terms of excess burden, it wishes to pay to secure certain equity objectives. In this sense, the narrow criterion of efficiency as avoidance of excess burden

must be subordinated to a broader concept of efficiency under which conflicting objectives are reconciled.”

6.7 PUBLIC SECTOR PRICING

Public sector of nation or state provides certain goods and services to increase social welfare of the society with the public cost like, transport services, postal services, telecommunication services, core industrial products etc. The government is being charged to use these goods and services to raise government revenue. There are so many conditions at the time of pricing such goods. Because government provide such facilities not for maximizing profit but for maximizing social welfare even bearing some loss. Maximizing welfare of society is the basic aim to provide. Several criteria are being set in variety of markets conditions for pricing public sector goods.

Wear and Friedman observed, “The great bulk of older established research on pricing principles is incompatible with the actual practice of public sector pricing.” According to the recommendation of British White Paper about nationalized industries, marginal cost pricing, has minimal effect on the prices that these industries charged. Indeed, there is little evidence that governments have taken much notice of more recent state of the art work on public sector pricing principles.

Principles of public sector pricing as;

Maximization of social welfare is main base of all principles of public sector pricing. This principle is on the base of several assumptions assumed in the theoretical perspective. There is absence of rival and significant cost of transaction. Prices are equal to the marginal cost only; equity is being achieved by transforming income instead of altering prices. Public sector services should be charged at the intersection of the demand curve by short run marginal cost curve is required for maximizing efficiency.

6.8 INCOME TAXATION

Income tax comes in the category of direct taxes. Income tax occupies prominent place in the field of direct taxes especially in developing countries India is not exception for it. Income tax was introduced by Sir James Wilson firstly in 1860. Initially it was the central revenue source but later it has been divided between centre and state to achieve vertical equity between centre and state. Income tax was reintroduced in 1869, which was discontinued in 1885. According to the Act 1922 income determined on the basis of mechanism of administering the tax and the rate at which tax was to be levied. This act remained from 1922 to 1961 on the statute book with several amendments time to time. According to the recommendations of Law Commission and Direct Taxes Administration Enquiry Committee, income tax Act, 1961 came into force.

There was a step system of income tax before 1939. After the amendment income tax Act 1939, the income tax structure was designed on slab system. It is found that in India continuously amendments have been made time to time in the slabs of Income tax. There are three main concepts of income tax. These are Concepts of economic gains, Concept of Service flow, Concept of net accretion. These concepts are define the about the procedure of types to levy income tax on certain types of methods.

Income tax is being implemented to bring of vertical as well as horizontal equity and it is based on principle of ability to pay principle. Income tax is generally a progressive tax because it levied with high rate on high income group and less on less income group. Poor people are exempted from it.

Merits of Income tax:

- 1) Income tax is levied with the principle of ability to pay principle.
- 2) It has progressive nature: High rate on high income and lesser on less income.
- 3) Income tax is easy to locate and its incidence is not shift forward and backward.
- 4) It is useful to reduce income inequalities.
- 5) It is also useful instrument to maintain economic stability with growth.
- 6) Canon of certainty, economy, productivity, convenience and elasticity are being satisfies by income tax.

Present Position of Income Tax and its Rules:

Everyone (weather it is resident or nonresident) who earns an income from any source except agriculture is subject to income tax in India. In other words, income tax is a tax on the income received by any individual or a Hindu undivided family or any tax payer other than companies and farmers. Particularly income tax is levied on income from salary, income from house property, income from capital gains, income from business and professional and income from other sources etc.

If we take here the assessment year 2021-22, income tax slabs are available in option to the tax payer to prefer both old and new income tax regime/slabs in India. There was an exemption for senior citizen and super senior citizen by some income amount. Before 2014, there was an exemption to women also but after that it has vanished by the government elected form 2014 in India.

The tax rate applicable has been same to normal resident as well as non-residents irrespective of age. There are three categories made by the government about the age of individuals. That are 1) Below 60 years, 2) Between 60 to 80 years called senior citizens and 3) Above 80 years age is called super senior citizen. There are varied of tax slab rules according to age of citizen in only first slab not all slabs.

Old Tax Regime: (Income Tax Slabs)

For normal citizen		For senior citizen		For super senior citizen
Income Range	Rate	Income Range	Rate	Rate
Up to Rs. 2.5 lakh	Nil	Up to Rs. 3 lakh	Nil	Nil
Rs. 2.5 lakh to Rs. 5 lakh	5%	Rs. 3 lakh to Rs. 5 lakh	5%	Nil
Rs. 5 lakh to Rs. 10 lakh	20%	Rs. 5 lakh to Rs. 10 lakh	20%	20%
Above Rs. 10 lakh	30%	Above Rs. 10 lakh	30%	30%

There are allowed all deductions including Section 80C, Section 80D etc. of the Income Tax Act 1961 in the old tax regime. If the tax payer wishes to get such all deductions he can prefer old tax regime or new tax regime. The second option of income tax slabs has been made available for tax payer by the authority in India. The following is new tax regime in option available for the same assessment year (AY),

New Income tax regime/slabs in India (for AY 2021-22)

Income tax slabs	Rate of Income Tax
Up to Rs. 2.5 lakh	Nil
Rs. 2.5 lakh to Rs. 5 lakh	5%
Rs. 5 lakh to Rs. 7.5 lakh	10%
Rs. 7.5 lakh to Rs. 10 lakh	15%
Rs. 10 lakh to Rs. 12.5 lakh	20%
Rs. 12.5 lakh to Rs. 15 lakh	25%
Above Rs. 15 lakh	30%

Surcharge on Income Tax:

Surcharge is being imposed on the high income group on the amount of income tax being paid by individual or institution. In short surcharge is an additional charge or tax. About Indian income taxation as following surcharges are being charge

Surcharge rate on Income range for assessment year 2021-22

Income Range	Surcharge rate for AY 2021-22
Rs. 50 lakh to Rs. 1 Crore	10%
Rs. 1 Crore to Rs. 2 Crore	15%
Rs. 2 Crore to Rs. 5 Crore	25%
Rs. 5 Crore to Rs. 10 Crore	37%
Above Rs. 10 Crore	37%

Health and Education Cess: 4% Health and education Cess has been levied on the amount of income tax plus surcharge.

Net Income Range	Rate of Income Tax	Health and Education Cess
Up to Rs. 2.5 lakh	Nil	Nil
Rs. 2.5 lakh to Rs. 5 lakh	5%	4%
Rs. 5 lakh to Rs. 10 lakh	20%	4%
Above Rs. 10 lakh	30%	4%

Alternative Minimum Tax (AMT): AMT applies to the non-corporate tax payer, those haven't be less than 18.5% (+HEC) of adjusted total income counted as per section 115JC. If the income is solely convertible into foreign exchange, the rate AMT is 9% instead of 18.5%.

Those persons net income is not exceeding of Rs. 5 lakh are able get rebate of Rs. 12500 from income tax amount. In short, there is income tax on the person whose net annual income is less than Rs. 5 lakh.

Dual Income Tax Slab System:

Government of India introduced dual income tax slab rules as noted above. It is on the choice of taxes payer to which chooses and pay the tax accordingly. One system is on the basis of old regime which levies more rate of tax but gives several types of deduction. The second is one which levies less tax rates but Income tax payers should leave the following deductions from income tax.

- 1) (Section 10(5)) travel concession, 2) (Section 10 (13A)) House Rent Allowance, 3) (Section 10 (14)) Official and Personal allowances, 4) (Section 10(17)) Allowances to MPs/MLAs, 5) etc. total 22 sections deduction are vanished for the tax payers those choose new income tax slabs.

6.9 CORPORATION TAX

Corporation tax is the direct tax. It is a tax levied on the income earned by the corporate bodies of company. Corporation tax is paid from the taxable net profit earned by the corporations during financial year. After paying corporation tax, remain amount of profit is distributed among share holders. Before 1960, there was super tax on companies known as corporation tax. From 1960-61, the income tax on companies was also included in corporation tax. From 1965, these both taxes integrated in one Corporation Tax.

Main characteristics of corporation tax:

- 1) Corporation tax has to pay by companies as flat rate according to define by Finance Act.

- 2) There are certain concessions granted to companies to pay corporation tax.
- 3) New manufacturing companies exempted from corporation tax for five years.
- 4) Companies are in under obligation to pay income tax.
- 5) New industries in backward region are exempted for first 10 years from corporation tax.

6.10 EXPENDITURE TAX

Expenditure tax is direct tax and it is levied on the amount of consumption expenditure of tax payers instead of income. Economists as J.S. Mill, Alfred Marshall, Pigou, Fisher argued in favor of expenditure tax on the ground of equity and administrative efficiency. Because, expenditure is also considers one of the main effective tests to denote taxable capacity of a person. According to Prof. Kaldor, "The expenditure tax is conceptually simpler and more satisfying than an income tax. It is more favorable to work, savings, risk supply and will lead to a much greater rate of economic progress." He believed that expenditure tax is sounder than the income tax,

Death duty, wealth tax, capital gain tax are the example of direct taxes and comes under the income taxation.

6.11 COMMODITY TAXATION

When commodities are being taxed at the time of production or the process of productions are called commodity taxes. Commodity taxes are levied by centre government as well as state governments in India. Two types of commodity taxes are being levied by the central government of India. They are excise duty and custom duty.

6.11.1 Excise Duty:

The excise duty is a tax levied on the production of commodity before it reaches to the consumer. According to the Constitution of India, the central government is empowered to levy excise duties on almost all commodities produced in a country excluding alcoholic liquors, opium and other narcotics. These excluded products are being levied excise duty by the states in India. It is the most crucial source of revenue to the Union Government. It was provision to transfer some of amount central excise duty from centre to state governments as recommended by the Finance Commission of India.

The excise duty was not popular till 1930. There were earlier excise duties on motor spirit in 1917, on kerosene in 1922, on silver in 1922, excise duty on cotton yard in 1924 which was abolished in 1934. From 1934, other commodities as sugar, steel ingots, matches etc. came under excise

duty. For the required revenue during Second World War, government brought more commodities under a preview of excise duty. In 1949, excise duty on mill made cloth re imposed by government.

The Taxation Enquiry Commission of 1953 recommended not only to increase in the number of commodities but also increase in the existing rate of excise on tea, cloth, kerosene, matches, sugar etc. State governments agreed to abolish sale tax on textiles, sugar and tobacco in 1957 and centre impose additional excise duty on it. The scope of excise duty has been enhanced time to time by the government. According to Article 272, excise duty is being levied and collected by it is sharable between centre and state.

Union Excise Duty Share to State recommended (by Finance Commission:

(In percentage)

Finance Commission	Share to the States
First Finance Commission	40%
Second Finance Commission	25%
Third Finance Commission	20%
Fourth Finance Commission	20%
Fifth Finance Commission	40%
Seventh Finance Commission	40%
Eight Finance Commission	45%
Ninth Finance Commission	45%
Tenth Finance Commission	47.5%

Thus the union excise duties are crucial for centre tax revenue as well as share for states. It is an indirect tax levied on production of commodities and producer included partial or total in the price of commodity which is paid by consumer.

6.11.2 Custom Duties:

Taxes levied on foreign trade are called custom duties. Custom duties are collected from main two heads. They are import duty and export duty. Custom duties were the important source of revenue for the Indian government. After the Second World War, its share declined considerably.

There are four main objectives of custom duties.

- 1) To protect home industries from foreign commodity competition.
- 2) To increase productivity of home industries.
- 3) To rise government revenue.
- 4) To make sufficiency of necessary goods in country.

6.11.2.1 Import Duties:

Import duties are being imposed as ad valorem on the import commodities. These are imposed according to Schedule I and II of the Indian Tariff Act 1934 subject to changes made by time to time. The main idea behind import duty is to restrict import and protect domestic market as well as industries. It helps to rise government revenue through import duties. The import duty collected by the government at the time of entering imported goods in a country. The import duty increases the price of import commodities and according to the law of demand, demand of such commodity from the citizens of country declines and domestic producers get protected.

With the accordance of Fiscal Commission of 1929, import duty levied on certain commodities as discriminating foreign policy in India. That means import duty started from 1929. From 20 August 1965, the import duty was rationalized under Finance Act 1965. The rate of import duty on raw material was fixed at 40 percent ad valorem, on semi processed and intermediate goods 60% and on finished consumer goods at 100%.

The committee under chaired by L. K. Jha proposed reforms in the import duties. It suggested lowering the rates of taxation on different inputs and machinery to give protection and discouragement of import of final goods.

6.11.2.2 Export Duty:

When the government imposes tax on the commodity at time of exporting from country is called export duty. British government was imposed export duties on the export from India in mid nineties to increase the revenue of British government. During the First World War, export duty was abolished and again it started to be levied.

After independent of India, export duty levied on large extent. There was not the objective to collect revenue behind export duty. The main objectives of export duty were to achieve stability of domestic prices in the internal market, to reduce export of raw materials, to attain self reliance in necessary goods. Export duties were levied on a number of items such as coffee, tobacco, hides, skins, leather, black pepper, mica etc in the Budget bill of 1986-87. To increased export of the country, government initiated by time to time with making changes in export import policies.

There are several commodity taxes imposes by centre as well as states. Commodity taxes are indirect taxes in nature as well as almost are proportional or regressive. Ability to principle is not properly applied with almost all of them. But high excise duties on alcoholic liquor, tobacco and such other products help to reduce its consumption which will protect the society and at other side it increases revenue of the state government to enhanced cost on public sector to promote economic growth and development. Now there is Goods and Service Tax (GST) started from 1917 in India where 50:50 percent revenue goes to centre and state.

6.11.3 Optimal Commodity Taxation:

Optimal tax means the structure of designing and implementing a tax that maximizes a social welfare function. The social welfare function is typically a function of individuals' utilities. It refers to maximize the aggregate of individual utilities.

6.12 TAX EVASION AND TAX AVOIDANCE

6.12.1 Tax Evasion:

It is the universal thing of the almost all countries that problem of tax evasion and tax avoidance is existed. The Royal Commission on Income Tax highlighted in early 20's that evasion of income tax existed beyond question in present time. The citizens are not loyal to pay the taxes on income they earn from public expenses. They are doing such practices continuously. The position in the developed nations like USA and France was also alarming. In India, tax evasion is existed and the people of India not paying taxes with royalty.

“Tax evasion means any activity which aims at hiding, understating or less than actual reporting income to reduce tax liability is term as tax evasion.” In other words, it means not paying a tax or paying less than actual have to pay is called tax evasion. Tax evasion is punishable offence in India.

Basically tax evasion is the root cause of black money in the country. It effect on inflation in an economy affects on the several part of the society particularly poor society. It also has been discouraging the productive system of the economy. The government deprived from tax revenue and the productive means developmental activities remain stand. It has been claimed by the Wanchoo Committee of Direct Taxes as, “It is no exaggeration to say that black money and tax evasion is like a cancerous growth in the country's economy which, if not checked in time, is sure to lead to its ruination.” Tax evasion is the illegal way to avoiding tax liability and avoidance is taking advantages of loop-holes to avoid paying taxes.

Estimates of Tax Evasion:

Tax evasion has been estimated time to time by different committees in India. The Taxation Enquiry Commission has estimated tax evasion was Rs. 50 crore. During the assessment year 195-54, Prof. Kaldor stated that the Rs. 200 to 300 crore taxes evaded in the country. Rangnekar estimated black money grew by 13.3 percent from 6.9 percent during 1961-62 to 1969-70. According to Wanchoo Committee estimates, only income tax evaded of Rs. 470 crore during 1968-69. According to S. M. Prasad's estimates, tax evasion increased from Rs. 701 crore to Rs. 12611 crore during 1953-54 to 1979-80. Such increasing trend of tax evasion is being seen in the Indian economy.

Causes of tax evasion:

Wanchoo Committee means the Direct Taxes Administration Committee has pointed out following causes of tax evasion.

- 1) There is high rate of taxes in direct tax laws.
- 2) The donations to political parties in India.
- 3) Corrupt business practices.
- 4) Economy on shortage and consequent controls and licenses.
- 5) High rate of sales tax and other indirect taxes.
- 6) There is ineffective enforcement of tax laws.
- 7) Deterioration of moral standard.

Other causes of tax evasion in India:

- 8) There is faulty maintenance of accounts.
- 9) Complexity and rigidity in tax laws.
- 10) Improper and inefficient implementation of laws.
- 11) High rate of cash transaction.

6.12.2 Tax Avoidance:

Tax avoidance is the practices to avoid paying taxes by using loop-holes of the tax laws. Tax payer uses the advantages of the loop-holes of the tax law to pay less taxes than actual it has pay. It is found that there is nobody wants to pay taxes honestly to the government. Everyone tries to reduce the tax burden by using advantages of the given concessions in the tax laws. The new concept has been given it as tax planning of individuals.

According to Josef Stieglitz, there are three principles of tax avoidance. These are as 1) postponement of taxes, 2) tax arbitrage across individuals facing different tax brackets, 3) tax arbitrage across income streams facing different tax treatment.

There are several anti avoidance legislation made in the world. Specifically there are two kind of anti-avoidance measures as; General Anti Avoidance Rules (GAAR) and Specific Anti Avoidance Rules (SAAR). The GAAR refers to the set of generic anti-avoidance rules. The SAAR targets to a specific avoidance practice or technique.

6.13 EFFECTS OF TAX AVOIDANCE AND EVASION

Tax evasion and tax avoidance practices are resulted to over burden on the others tax payers and the less government expenditure which reduces the developmental practices in the country. In this regard President Roosevelt stated which is relevant to the situation of India, “Methods of escape or intended escape from tax liability are many. Some are instances of avoidance which appear to have, color of legality, others are on the border

line of legality, and others are plenty contrary even to the letter of law. All are alike in that they represent determined efforts on the part on those who use them to dodge the payment of taxes which are based on ability to pay. All are alike in that failure to pay result to in shifting the tax load to the shoulders of others less able to pay and mulcting the Treasury of the government's just due."

Tax evasion increases black money and its effects on the economy. There is interlinking between the tax evasion and black money as; tax evasion leads to the creation of black money and the black money utilization secretly in business for earning more income inevitably leads to tax evasion. In short, the tax evasion and black money go hand in hand. They imposes automatically greater burden on the honest tax payers and it leads to more income inequality. It leads to concentration of wealth in the hand of faulty persons it is dangerous to the economy and social ethics.

The tax evasion diverts tax energy from legal productive activity to the non productive activity. The faiths of honesty tax payers on laws are missed by such persons those are evade tax burden. The Wanchoo Committee has said correctly, "it is no exaggeration to say that black money and tax evasion is like a cancerous growth on the country's economy which, if not checked in time, is sure to lead its ruination." Thus the tax evasion makes the big problem in the social health.

6.14 PUNISHMENTS PROVISION IN TAX LAW

Following are the tax evasion punishments.

1. For not filling income tax return:

Taxpayer is compulsion to file income tax return before the due date as required according to Income Tax Act under 139 subsections 1. If a tax payer fails to fill income tax return assessing authority can impose penalty of Rs. 5000 or more than that.

2. Failure to pay tax:

If a tax payer fails to pay wholly or partly –self assessment tax or fee and interest , the taxpayer will be declare as defaulter according to the Income Tax Act section 140A (1). As per the Section of 221 (1), the assessing officer can declare tax payer as defaulter and fine on it not more than the tax amount to pay. But if the person provides valid reason the fine will be exempted by the assessing officer.

3. Failure to Get Accounts Audit:

With the demand notice for tax payment received by tax payer and unable to pay tax within given 30 days it declare as defaulter. According to section 92(E), such defaulter has penalty of Rs. 1 lakh.

4. Concealment of Income:

If some is found concealing tax, it will be punished under section 271 (C) of income tax Act. There is a provision of 100% to 300% penalty of tax evaded. The penalty of tax evasion will be varies under certain circumstances.

5. Failure to comply with Income Tax Notice:

Whenever the Income Tax department issues a tax notice; the tax payer has to comply. If it failure to comply enables the assessing officer to send a notice under section 145(1) or 143(2) can ask the taxpayer to file the return of income and to furnish in writing all details of assets and liabilities.

Study of Public finance gives the knowledge of Governments economic policies specifically fiscal policies. How the government of public sector uses different fiscal policies and instruments of fiscal policy to established economic stability in the country with maintaining steady economic growth and development.

6.15 SUMMARY

This chapter of the subject introduced about the taxes which are liked by the government but not liked by the citizens of the country. Here citizen has been used instead of tax payer because everyone is paying taxes either direct or indirect. Some are paying direct as well as indirect taxes also. All are paying indirect taxes either they are from economically rich group or economically poor group. The study of this subject is useful for the student in academic carrier and their daily life.

6.16 QUESTIONS

1. Explain the merits and demerits of direct taxes.
2. Explain the merits and demerits of indirect taxes.
3. Explain the relationship between taxation and labour supply
4. Write not on
 - i) Horizontal equity
 - ii) Vertical equity
 - iii) Income taxation
 - iv) Corporation tax
 - v) Expenditure tax
 - vi)Excise Duty
 - vii)Custom Duty
 - viii) Tax Evasion
 - ix) Tax Avoidance

REFORMS AND GOVERNMENT-I

Unit Structure

- 7.0 Objectives
- 7.1 Introduction
- 7.2 Fiscal Rules
- 7.3 International and Indian Experience
- 7.4 Decentralisation
- 7.5 Summary
- 7.6 Questions

7.0 OBJECTIVES

After completing Post graduation level study, it is expected that, students should know What is fiscal policy? how it is framed and what are the rules state should follow while preparing it? This module will help students to answer above questions. Also, this module put light on decentralisation of fiscal policy. Taxation system and taxation power, government expenditure, intergovernmental fiscal relations.

7.1 INTRODUCTION

Fiscal policy is an important part of public finance. According to Paul Samuelson, fiscal policy means a policy announced by Government in respect of public expenditure and taxation. Arthur Smithies says that fiscal policy is a policy under which government uses the tools of public expenditure, taxation and public debt which effects on production, employment and income level of a country. Prof. Lipse says that fiscal policy is a tool of achieving the macro-economic goals of economic development of a country. Thus, fiscal policy is a policy implemented by Government for macro-economic objectives of economic development, we will realise the meaning of fiscal policy with the help of the various objectives given below.

7.2 FISCAL RULES

According to OECD's(Organization for Economic Co-operation and Development)budgeting practices and procedures, A fiscal rule is a long-term constraint on fiscal policy through numerical limits on the budgetary

aggregates. Without overall limits, incremental budgeting can become an open-ended process in which governments accommodate demands by spending more than they have. A fiscal rule has two fundamental characteristics. First, it presents a constraint that binds political decisions made by the legislature and by the executive. And second, it serves as a concrete indicator of the executive's fiscal management. While fiscal rules can help governments to achieve fiscal objectives and discipline, there is no one-size-fits-all rule for every country.

Fiscal rules can have different national legal foundations, and may be enshrined in constitutions, or primary or secondary legislation. Other countries may stipulate fiscal rules in public political commitments or in internal rules set out by the ministries of finance. Australia is an interesting example as it has in place all four kinds of rules. The legal basis for three of them is the Budget Honesty Act, which is a strong political commitment; in the case of the debt rule, it is founded in legislation. Japan and Korea have only expenditure rules, in both cases as internal rules and policies.¹

7.2.1 Aims of Fiscal Rules:

According to David Cowen, Director IMF Capacity Development Office in Thailand (CDOT) fiscal rules should aim to wards following goals.²

1.	Simplicity	The rule should be understood by decision-makers and the public.
2.	Sustainability	Compliance with the rule should suffice to ensure long- term sustainability.
3.	Stabilization	Following the rule should contribute to macroeconomic stability, or at least not add to volatility.
4.	Operational Guidance	It should be possible to translate the rule into clear guidance in the annual budget process.
5.	Resilience	To build credibility, a rule should last and not be abandoned after a shock.
6.	Verification	It should be possible to verify if the government has complied with the rule.
1.	Simplicity	The rule should be understood by decision-makers and the public.
2.	Sustainability	Compliance with the rule should suffice to ensure long- term sustainability.
3.	Stabilization	Following the rule should contribute to macroeconomic stability, or at least not add to volatility.
4.	Operational	It should be possible to translate the rule into clear

¹ https://www.oecd-ilibrary.org/docserver/gov_glance-2013-26-en.pdf?expires=1621580112&id=id&accname=guest&checksum=5061DFE2D3A5123CDAA03D8B5D2E45A02

² https://www.unescap.org/sites/default/files/02_%5BCowen%5D_Making%20Fiscal%20Rules%20Work_IMF.pdf

	Guidance	guidance in the annual budget process.
5.	Resilience	To build credibility, a rule should last and not be abandoned after a shock.
6.	Verification	It should be possible to verify if the government has complied with the rule.

7.2.2 Types of fiscal rules:

1. **Debt rules** -Set an explicit limit for public debt.
2. **Budget balance rules** -Constrain the evolution of the debt ratio.
3. **Expenditure rules** - Limit total / primary / current spending.
4. **Revenue rules** - Set ceilings or floors on revenues.

7.2.3 Success of fiscal rules:

A. More successful:

- Under stable/good economic conditions.
- For controlling local government finances.
- When exiting from fiscal crisis: seen in some case (although they could be a case of mistaken causality)

B. Less successful:

- With lack of societal support.
- During severe economic crisis.
- In coping with all economic circumstances.
- When they bite: induce avoidance/creative accounting.

7.2.4 Fiscal rules and fiscal responsibility laws (FRLs):

FRLs are useful instruments in supporting desired fiscal outcomes. FRLs provide a legal framework that embeds in law an agreed set of policies, processes, or arrangements intended to improve fiscal discipline, transparency, accountability, and stability by requiring governments to commit to monitorable fiscal policy objectives and strategies. Their success depends crucially on appropriate design and wide political support and acceptance.

Fiscal rules can make the requirements of FRLs more focused and binding. Fiscal rules have to balance the requirements of enforcement with the need for flexibility in accommodating changing economic circumstances. FRLs and fiscal rules need to be supported by adequate fiscal monitoring and management capacities and be calibrated to country specific circumstances.

7.2.5. Need for FRL's:

1. Debt and deficits paths
 - Unsustainable.

- Pro-cyclical
 - No consideration of inter-generational issues.
2. Lack of fiscal/budget discipline.
 3. No anchor for fiscal policy.
 4. Fiscal policy not a transparent, accountable, and/or orderly process.
 5. Sometimes no actual fiscal policy—budget policy drives the day.

7.3 INTERNATIONAL AND INDIAN EXPERIENCE

7.3.1. International Experience:

1. Chile – 2006 Fiscal Responsibility Act

- Fiscal Rule: Structural balance
- Established various funds including a pension and stabilization fund
- Increased fiscal reporting of contingent liabilities

2. Ireland – 2012 Fiscal Responsibility Act

- **Fiscal Rules:** General budget balance and debt rules, consistent with Stability and Growth Pact; includes corrective mechanisms and sanctions.
- Set out medium-term budgetary objectives
- Increased fiscal reporting
- Established a fiscal council.

3. Peru – 2013 Fiscal Responsibility and Transparency Law

- **Fiscal rules:** Structural balance rule and debt rules, including sanctions
- Required a medium-term macroeconomic framework
- Set out a fiscal stabilization fund for national government
- Established a Fiscal Council.

4. Thailand – 2018 Fiscal Responsibility Act

- Fiscal rule on public investment
- Set up the National Fiscal Policy Board
- Required a medium-term fiscal framework
- Established process rules including on virements and setting of debt limits
- Featured transparency and accountability requirements.

7.3.2. Indian Experience:

The FRBM Act is a law enacted by the Government of India in 2003 to ensure fiscal discipline – by setting targets including reduction of fiscal

deficits and elimination of revenue deficit. It is considered as one of the major legal steps taken in the direction of fiscal consolidation in India. The full form of FRBM is **Fiscal Responsibility and Budget Management**.

Need for FRBM Act:

In India, the borrowing levels were very high in the 1990s and 2000s. Indian Economy was weak as it had high Fiscal Deficit, high Revenue Deficit, and high Debt-to-GDP ratio. By 2003, the continuous government borrowing and the resultant debt had severely impacted the health of the Indian economy. Much of the borrowing was utilized for interest payments of previous borrowings, but not for productive-purposes. This resulted in interest payments becoming the largest expenditure item of the government. Many economists then warned the government that this condition is not sustainable. They advised legal steps to prevent India to fall into a debt-trap.

Parliamentarians of India too felt that there should be control on the government of India not to resort to a high level of borrowing to fund its expenditure. Hence in 2000, they introduced a bill to bring responsibility and discipline in matters of expenditure and debt. This bill was passed by the Indian Parliament in 2003 and came to be known as the **Fiscal Responsibility and Budget Management Act**.

The Fiscal Responsibility and Budget Management (FRBM) Act, 2003:

The Fiscal Responsibility and Budget Management Bill (FRBM Bill) was introduced in India by the then Finance Minister of India, Mr. Yashwant Sinha in December 2000. The provisions provided in the initial versions of the bill were too drastic. After much discussions, a watered-down version of the bill was passed in 2003 to become the FRBM Act. The FRBM Rules came into force from July 5, 2004.

Objectives of FRBM Act.:

FRBM Act is all about maintaining a balance between Government revenue and government expenditure. The intention of the **Fiscal Responsibility and Budget Management Act** was to bring – **Fiscal discipline**.

- Efficient management of expenditure, revenue and debt.
- Macroeconomic stability.
- Better coordination between fiscal and monetary policy.
- Transparency in the fiscal operation of the Government.
- Achieving a balanced budget.

Additionally, the act was expected to give the necessary flexibility to Reserve Bank of India (RBI) for managing inflation in India.

Provisions of the Fiscal Responsibility and Budget Management Act

The FRBM rules mandate **four fiscal indicators** to be projected in the medium-term fiscal policy statement. These are:

1. Revenue deficit as a percentage of GDP
2. Fiscal deficit as a percentage of GDP.
3. Tax revenue as a percentage of GDP.
4. Total outstanding liabilities as a percentage of GDP.

The FRBM Act set targets for fiscal deficit and revenue deficit:

The FRBM act also provided for certain documents to be tabled in the Parliament of India, along with Budget, annually with regards to the country's fiscal policy. This included *the Medium-term Fiscal Policy Statement, Fiscal Policy Strategy Statement, Macro-economic Framework Statement, and Medium-term Expenditure Framework Statement*. For details check the details of the budget documents.

Initial FRBM Targets (to be met by 2008-09):

1. **Revenue Deficit Target:** revenue deficit should be completely eliminated by March 31, 2009. The minimum annual reduction target was 0.5% of GDP.
2. **Fiscal Deficit Target:** fiscal deficit should be reduced to 3% of GDP by March 31, 2009. The minimum annual reduction target was 0.3% of GDP.
3. **Contingent Liabilities:** The Central Government shall not give incremental guarantees aggregating an amount exceeding 0.5 per cent of GDP in any financial year beginning 2004-05.
4. **Additional Liabilities:** Additional liabilities (including external debt at current exchange rate) should be reduced to 9% of the GDP by 2004-05. The minimum annual reduction target in each subsequent year to be 1% of GDP.
5. **RBI purchase of government bonds:** to cease from 1 April 2006. This indicates the government not to borrow directly from the RBI.

Did the government meet the FRBM targets by March 2009?:

No. Implementing the act, the government had managed to cut the fiscal deficit to 2.7% of GDP and revenue deficit to 1.1% of GDP in 2007–08. However, the targets were not met. The global financial crisis (2007-08) led the government to infuse resources in the economy as the fiscal stimulus in 2008. Therefore, fiscal targets had to be postponed temporarily in view of the global crisis.

Amendments in the FRBM Act:

In 2012 and 2015, notable amendments were made, resulting in relaxation of target realisation year. A new concept called Effective Revenue Deficit (E.R.D) was also introduced. The requirement of 'Medium Term

Expenditure Framework Statement' was also added via amendment in FRBMA.

FRBM Targets after Amendment to FRBM Act in 2012 (to be achieved by 2015)

1. **Revenue Deficit Target:** revenue deficit should be completely eliminated by March 31, 2015. The minimum annual reduction target was 0.5% of GDP.
2. **Fiscal Deficit Target:** fiscal deficit should be reduced to 3% of GDP by March 31, 2015. The minimum annual reduction target was 0.3% of GDP.

FRBM Targets after Amendment to FRBM Act in 2015 (to be achieved by 2018)

1. **Revenue Deficit Target:** revenue deficit should be completely eliminated by March 31, 2018. The minimum annual reduction target was 0.5% of GDP.
2. **Fiscal Deficit Target:** fiscal deficit should be reduced to 3% of GDP by March 31, 2018. The minimum annual reduction target was 0.3% of GDP.

Recommendations of FRBM Review Committee headed by NK Singh:

The government believed the targets were too rigid. In May 2016, the government set up a committee under NK Singh to review the FRBM Act. The committee recommended that the government should target a fiscal deficit of 3 per cent of the GDP in years up to March 31, 2020, cut it to 2.8 per cent in 2020-21 and to 2.5 per cent by 2023.

The Committee suggested using debt as the primary target for fiscal policy. This ratio was 70% in 2017. These are the targets set by NK Singh:

1. **Debt to GDP ratio:** The review committee advocated for a Debt to GDP ratio of 60% to be targeted with a 40% limit for the centre and 20% limit for the states.
2. **Revenue Deficit Target:** revenue deficit should be reduced to 0.8% of GDP by March 31, 2023. The minimum annual reduction target was 0.5% of GDP.
3. **Fiscal Deficit Target:** fiscal deficit should be reduced to 2.5% of GDP by March 31, 2023. The minimum annual reduction target was 0.3% of GDP.

Latest FRBM Targets:

The latest provisions of the FRBM act requires the government to limit the fiscal deficit to **3%** of the GDP by **March 31, 2021**, and the debt of the central government to **40%** of the GDP by **2024-25**, among others.

The Act provides room for deviation from the annual fiscal deficit target under certain conditions.

Escape Clause in the FRBM Act:

Escape clause refers to the situation under which the central government can flexibly follow fiscal deficit target during special circumstances. This terminology was innovated by the NK Singh Committee on FRBM.

In Budget 2017, Finance Minister Arun Jaitley deferred the fiscal deficit target of 3% of the GDP and chose a target of 3.2%, citing the NK Singh committee report.

However, the Comptroller and Auditor General of India (CAG) pulled up the government for deferring the targets which it said should have been done through amending the Act.

In 2018, the FRBM Act was further amended. Specific details were updated in sub-section (2) of Section 4. The clause allows the govt. to relax the fiscal deficit target for up to 50 basis points or **0.5** per cent. Under FRBM, if the escape clause is triggered to allow for a breach of fiscal deficit target, the RBI is then allowed to participate directly in the primary auction of government bonds, thus formalising deficit financing.

The Escape Clauses can be invoked:

- By the Government after formal consultations and advice of the Fiscal Council.
- With a clear commitment to return to the original fiscal target in the coming fiscal year.

In 2020, Finance Minister, Nirmala Sitharaman used the escape clause provided under the FRBM Act to allow the relaxation of the target. Finance Minister revised the fiscal deficit for FY20 to 3.8 per cent and pegged the target for FY21 to 3.5 per cent.

Note: The Act exempts the government from following the FRBM guidelines in case of war or calamity.

Current status of Fiscal Deficit and Revenue Deficit:

Table No. 7.1

		Revised Estimates 2019-20	Budget Estimates 2020-21	2021-22 (Projections)	2022-23 (Projections)
1.	Fiscal Deficit	3.8	3.5	3.3	3.1
2.	Revenue Deficit	2.4	2.7	2.3	1.9
3.	Primary Deficit	0.7	0.4	0.2	0.0

4.	Gross Tax Revenue	10.6	10.8	10.7	10.7
5.	Non-tax Revenue	1.7	1.7	1.5	1.5
6.	Central Government debt	50.3	50.1	48.0	45.5
7.	Of which Liabilities on account of EBR	0.7	0.8	0.9	0.9

- Fiscal Deficit (FD)- The Fiscal deficit as per the Indian Budget 2020-21 was estimated **3.5 %** of GDP.
- Revenue Deficit (RD)- The Revenue Deficit as per the Indian Budget 2020-21 was estimated **2.7 %** of GDP.
- Effective Revenue Deficit (ERD)- The effective revenue deficit as per the Indian Budget 2020-21 was estimated **1.8 %** of GDP.
- Tax to GDP ratio: 10.8
- Debt to GDP ratio (Central Government): 50.1

What if there is no Fiscal Discipline?:

If there is no fiscal discipline, the government (executive) may spend as it wishes.

A country is just like a house; if the expenditure is too much and if there is no revenue to balance the high expenditure, the country will eventually fall into a debt trap, which may finally result in its collapse.

Conclusion:

The FRBM Act seeks to achieve long-term macroeconomic stability, while generating budget surpluses, prudential debt management, limiting borrowings to cut down deficits and debt, greater transparency, removal of fiscal impediments and providing a medium-term framework for budgetary implementation.

As seen in the above analysis, different governments have failed to achieve the FRBM targets set to be achieved in 2008 even by 2020.

Though the Act aims to achieve deficit reductions prima facie, an important objective is to achieve inter-generational equity in fiscal

management. This is because when there are high borrowings today, it should be repaid by the future generation. But the benefit from high expenditure and debt today goes to the present generation.

Achieving FRBM targets thus ensures inter-generation equity by reducing the debt burden of the future generation.

7.4 DECENTRALISATION

FISCAL DECENTRALIZATION is in vogue. Both in the industrialized and in the developing world, nations are turning to devolution to improve the performance of their public sectors. In the United States, the central government has turned back significant portions of federal authority to the states for a wide range of major programs, including welfare, Medicaid, legal services, housing, and job training. The hope is that state and local governments, being closer to the people, will be more responsive to the particular preferences of their constituencies and will be able to find new and better ways to provide these services. In the United Kingdom, both Scotland and Wales have opted under the Blair government for their own regional parliaments. And in Italy the movement toward decentralization has gone so far as to encompass a serious proposal for the separation of the nation into two independent countries. In the developing world, we likewise see widespread interest in fiscal decentralization with the objective of breaking the grip of central planning that, in the view of many, has failed to bring these nations onto a path of self-sustaining growth. But the proper goal of restructuring the public sector cannot simply be decentralization. The public sector in nearly all countries consists of several different levels. The basic issue is one of aligning responsibilities and fiscal instruments with the proper levels of government. As Alexis de Tocqueville observed more than a century ago, "The federal system was created with the intention of combining the different advantages which result from the magnitude and the littleness of nations" (1980, v. I, p. 163). But to realize these "different advantages," we need to understand which functions and instruments are best centralized and which are best placed in the sphere of decentralized levels of government. This is the subject matter of fiscal federalism. As a subfield of public finance, fiscal federalism addresses the vertical structure of the public sector. It explores, both in normative and positive terms, the roles of the different levels of government and the ways in which they relate to one another through such instruments as intergovernmental grants. These direct taxes, states have the power to levy indirect taxes like those on commodities and services such as GSI.

Besides tax revenue, states have other sources of receipts on revenue account. These are non-tax revenues such as interest receipts dividends from state enterprises etc.

Then there are receipts on capital account, which are loans taken from the market in the form of bonds and securities, and loans, which flow from the centre. In addition, there are receipts like share in central taxes, grants aid

and other receipts of funds from the centre for centrally sponsored schemes.

7.5 SUMMARY

According to OECD's (Organization for Economic Co-operation and Development) budgeting practices and procedures, A fiscal rule is a long-term constraint on fiscal policy through numerical limits on the budgetary aggregates.

Types of fiscal rules:

1. Debt rules - Set an explicit limit for public debt.
2. Budget balance rules - Constrain the evolution of the debt ratio.
3. Expenditure rules - Limit total / primary / current spending.
4. Revenue rules - Set ceilings or floors on revenues.

The FRBM Act is a law enacted by the Government of India in 2003 to ensure fiscal discipline – by setting targets including reduction of fiscal deficits and elimination of revenue deficit. It is considered as one of the major legal steps taken in the direction of fiscal consolidation in India. The full form of FRBM is Fiscal Responsibility and Budget Management.

7.6 QUESTIONS

1. What are fiscal rules? Explain its aims.
2. Discuss briefly Indian and international experience of fiscal rules.

REFORMS AND GOVERNMENT – II

Unit Structure

- 8.0 Objectives
- 8.1 Introduction
- 8.2 India's Federal Structure
- 8.3 Taxation Power
- 8.4 Expenditure responsibilities
- 8.5 Intergovernmental Transfer
- 8.6 VAT, GST
- 8.7 Summary
- 8.8 Questions
- 8.9 References

8.1 OBJECTIVES

1. To understand India's Federal Structure.
2. To know taxation powers of different government authority.
3. To understand Expenditure responsibilities.
4. To know how intergovernmental transfer took place.
5. To understand Value added Tax and Goods and Service Tax.

8.2 INTRODUCTION

A federation is a form of government in which the sovereign or political power is divided between the central and the state or local governments such that each government, within its own sphere, is independent of the other. Under the federal system of government, there is a sovereign authority in the centre, and under it are the different units of the government. The duties and rights of these government units are determined in a certain well-defined way in the Constitution. Some of the functions of these units are independent of the direct control of the centre, and for the performance of these functions, the right to collect revenue and to incur expenditure is given to them. The general principles of public finance are applicable equally to the federal as well as the unitary forms of government. However, the federal system of government has some of its specific problems in regard to finance.

What is a federal set-up:

In the words of Robert Gorson *Federalism is a form of government in which sovereignty or political power is divided between the central and the local government so that each of them, within its own sphere is independent of the other.* In other words, federalism may be considered as a form of political association in which two or more states constitute a political unity with a common government, but in which the member states retain a measure of internal autonomy. In such a setup, there is more than one government for each region or state. Thus, under the federal system of the government, sovereign authority lies in the centre or federal or union government. The concept of federal finance was developed in America between 1776-79. Federal finance means division and coordination of different items of income and expenditure between the central government, state government and local governments, under this system of federal finance, there is adequate independence of state and local governments as to their income and expenditure. According to Dr. R.N. Bhargava, "the term 'federal finance' refers to the finance of the federal as well as of the state governments and the relationship between the two." In federal finance, central authority (central government) holds superiority over all units (state governments), but these units are given autonomy in certain matters.

History of federal finance in India:

India is a 'federal republic' and this provision is enshrined in the country's Constitution. The financial powers and responsibilities of the different government units have been clearly defined in the Indian Constitution. However, while the Constitution of India and the provisions mentioned therein are the final stage in the development of federal finance in India, the growth of the federal system of finance in the country has been achieved through an evolutionary process over the past one hundred years. From the complete centralisation of financial powers to the present system of federal finance, the financial system in this country has passed through several stages. The history of the gradual evolution of federal finance in India may be studied under the following five periods: 1. First period-1833 to 1870. 2. Second period-1871 to 1918. 3. Third period-1919 to 1935. 4. Fourth period-1936 to 1949. 5. Fifth period from-1950 to yet. (Beginning after the commencement of the present Constitution of India) In this period, we include: (i) The Deshmukh award, and (ii) The allocation of revenue resources between the centre and states in the country as laid down in the Constitution of India, 1950.

1. First Period (1833-1870):

In 1833, the financial system was completely centralised by a Charter Act of British Government which provided for the appointment of the Governor of Bengal as the Governor-General of India and the Governors in different states were made subordinate to him for financial matters. The revenue was collected in the name of the Government of India and the Governor-General had full powers to spend it. All expenses and appointments were to be sanctioned by the Governor-General. In fact, the

Governor's influence on the Governor-General of India and their tactics in showing deficits in their respective states, was the sole criteria for the determination of the volume of grants in aid of the states. That is why, this system had all the defects of being uneconomical, inconvenient and lethargic which are stated as below:

- A. This system was uneconomical and inconvenient.
- B. It was lethargic in administration and the state held resentment against it.
- C. The Governors of states had a constant tendency to show deficits in their respective states and personal influence was the main criterion for the grants-in-aid from the centre.

2. Second Period (1871-1918):

Before 1871, the central government in the country had complete control over the revenue and expenditure in the country. The provinces were given fixed grants by the central government to enable them to cover their expenses. This practice resulted in uncertainty for the central finances and led to the incurring of wasteful expenditure by the provincial governments. The frequent practice of disbursing the grants-in-aid on the basis of uniformity to the provinces was also unsuitable for a large country like India with great diversities in the local conditions. Consequently, in 1871, Lord Mayo took the first step towards financial decentralisation and some decentralisation in the financial matters was introduced in the country in 1871. This decentralisation was introduced in the form of a system of 'provincial financial settlements'. Under this system, certain heads of expenditure like forest excise, stamps, land revenue, police, jails, education, medical services, registration, roads and civil works, which were regarded as local in character were made over to the provinces. Consequently, for the management of these departments, the provincial governments were given annual fixed lump sum grants of Rs. 4.68 crores and some limited powers of taxation. Although the allocation of revenue resources between the centre and the provinces was not based on sound financial principles, nevertheless it represented the first step towards the emergence of the system of federal finance in India. In 1882, the system of giving fixed grants to the provinces was abolished and the revenue resources were divided into the following three categories or heads:

A. Imperial heads: Under this head, the centre retained the entire profits of the commercial departments and the proceeds from customs, salt and opium. As the income derived from these departments was not sufficient to cover the central expenditure, other sources of revenue including income tax, were divided between the central and provincial governments.

B. Provincial heads: The central government retained a proportion, fixed in the case of each province, of the proceeds of the main heads of revenue collected in the provinces, based on an assessment of the latter's respective needs. In practice, since no definite standards of needs were evolved,

allocation to the provinces was largely a result of history. These consisted of the civil departments and provincial works.

C. Divided heads: The revenue from 'divided heads' being insufficient to meet the needs of the provincial governments, was supplemented by means of fixed cash assignments, recurring as well as non-recurring, which continued to remain an important feature of the system. This category included the revenue derived from excise duties, assessed taxes, stamps, forests and registration.

3. Third Period (1919-1935):

The movement towards the system of financial decentralisation in the country was further consolidated under the Montagu-Chelmsford Reforms which took practical shape in the form of Government of India Act, 1919 which came into force in 1921. This Act provided for the clear separation of state financial resources from those of the centre. Land revenue, excise duties, stamps and irrigation charges were the important resources of revenue which were now given to the states. Meston Award It was under this idea that the Financial Relations Committee (under Lord Meston) was constituted to recommend, a scheme of provincial contribution to the central government. This committee suggested a scheme which was based upon what it called the 'initial contributions' and 'standard contributions'. The operations of Meston Scheme led to heavy deficit for provinces. Provincial governments demanded changes in the system of financial arrangements so that provincial autonomy could be achieved. Several proposals were put forth for constitutional changes. This led to the formation of successive enquiry committees to examine those proposals.

A. Indian Taxation Enquiry Committee, examined, among other matters, the division of sources of revenue and the structure of financial relations between the centre and the provinces, and recommended that- general stamp, excise duty on foreign liquors manufactured in the country and opium should be transferred to the power to levy and administer income tax; if any division of taxes is to be made, income tax should be the main balancing factor; a share of income tax may be assigned to the provinces and it should be distributed on the basis of centre; provinces should not be given the domicile.

B. First Peel Committee, 1931 suggested that: All income tax proceeds should be transferred to the provinces at the outset of federation, collection and administration being in federal hands; federal tax revenues would be mostly derived from indirect taxation; any resultant federal deficit could be met from provincial contributions which would be extinguished in definite stages over a period of 10 to 15

C. Percy Committee, 1932 was, accordingly, appointed to examine these issues. The Committee recommended that: Any procedure for distribution should be simple, easily understood and administratively workable; allocation on the basis of collections would lead to gross injustice between

the provinces; distribution on the basis of population is not wholly scientific but could be adopted in certain circumstances; the basis of origin may be theoretically commendable but would lead to arbitrariness; ultimately, the basis of residence in one of two forms is preferable; income tax should be shared between the centre and the provinces and the share of the provinces should not be altered from year to year but should be fixed for a term of years, subject to a revision every five years in the light of actuals; and federal grants, if and when they become feasible, should be distributed on the basis of population.

D. Second Peel Committee, 1932 proposed a two-fold division of the proceeds of taxes on income into shares, which would be assigned as a permanent constitutional arrangement, to the centre and the provinces respectively.

E. White Paper on Indian Constitutional Reforms, 1931 recommended that: A prescribed percentage, not less than 50 per cent and not more than 75 per cent, of the net revenue derived from taxes on income other than agricultural income should be assigned to the provinces on a prescribed basis; both the federation and the provinces should have the power to levy surcharges on income tax for their own purposes; the federal legislature should be empowered by law to assign to the units the whole or part of the yield of salt duties, excise duties and export duties; and in respect of certain taxes, including terminal taxes and death duties, while the power to levy the tax would vest solely with the federation, the proceeds would be distributed to the provinces.

F. Parliamentary Committee, 1934, reforms, generally agreed with the proposals made in the White Paper and suggested that: The provincial share of income tax should be prescribed by an Order-in-Council; the share of the provinces might not exceed half of the net revenue from income tax; and provinces should not be empowered to impose surcharges on personal income tax. The Joint Parliamentary Committee's proposals relating to income tax were incorporated in the Government of India Act, 1935.

G. Government of India Act, 1935. This Act did not make any changes in the allocation of heads between the centre and the units. It revived, in a somewhat modified form, the earlier principle of dividing the proceeds of certain central heads of revenue.

4. Fourth Period (1936-1949):

According to the Act of 1935, there was a complete separation of federal and provincial sources of revenue. However, the princely states had to remain outside the system of federal finance in the country. Under this provision, the sources of revenue of the provinces, constituted the land revenue, irrigation charges, excise duties on alcoholic liquors, opium, narcotic drugs, medical and toilet preparations, agricultural income tax, stamps and registration. The central resources comprised of corporation

tax, custom duties, railway, telegraph, broadcasting, currency and coinage and military receipts. Moreover, the Act also provided for certain taxes which were to be levied and collected by the central government but some share of it was to be distributed among the states. It had the provision for certain other taxes which were to be levied and collected by the states, but the receipts were to be shared between the centre and states. The Act also made another provision of grants-in-aid to those states which must be in need of financial help. Finally, taxes on succession to non-agricultural property, were to be imposed by the federal government, but were to be wholly assigned to the provinces. Otto Niemeyer Report This Act had another provision of financial enquiry to be made before the introduction of 'provincial autonomy'. Sir Otto Niemeyer was appointed in 1936 to enquire into the financial relations between the centre and the states. He recommended the following measures:

1. Fifty per cent of the proceeds of income tax should be assigned to the provinces. As regards distribution among the provinces, substantial justice would be done by fixing the scale of distribution partly on residence and partly on population.
2. The centre should retain, for the first five years, out of the provincial share, a sum equivalent to the amount by which the central share plus the contribution from the Railways falls short of Rs. 13 crores a year. The amount retained from the provincial share should be surrendered to the provinces over a further period of five years.
3. The provinces' share of the jute export duty should be raised from 50 to 62.5 per cent of the net proceeds.
4. The outstanding debts to the centre from Bengal, Bihar, Assam, North West Frontier Province and Orissa, contracted prior to 1 April 1935 should be cancelled and also the reduction in the outstanding loan of the central provinces.

The above recommendations were accepted and incorporated in the Government of India (Distribution of Revenues) Order, 1936. This Order, subject to a change made in 1940, continued to regulate the allocation of revenues between the centre and the units until the partition of the country in August 1947.

It was decided that, for the duration of the Second World War the centre should be permitted to retain a fixed sum of Rs. 4.5 crores out of the provincial share of income tax. This continued from 1940 to 1945. In each of the next five years, the sum retained by the centre was reduced by Rs. 75 lakhs per year over the previous year and the full provincial share was restored to the provinces in 1950-51.

5. Fifth Period (After Independence):

The Constitution of India made the same financial provisions as were provided in the Government of India Act, 1935. As a Finance Commission could be set up only after the Constitution came into force on 26 January 1950, the states' share of income tax and its distribution and the payment of grants-in-aid under Articles 273 and 275 of the Constitution had to be regulated by Order of the President for the period between the commencement of the Constitution and the appointment of a Finance Commission. Some of the states had expressed dissatisfaction with the arrangements for the allocation of income tax and jute export duty made by the Government of India, immediately after Partition. Hence, it was decided that these matters should be referred to an impartial authority for reconsideration.

Deshmukh Award:

Towards the end of 1949, C.D. Deshmukh was requested to look into these matters. The Deshmukh Award was given effect to from 1 April 1950 and remained in force for two years ending with 31 March 1952. As a Finance Commissioner could not be appointed immediately, the Government of India invited Shri C.D. Deshmukh to examine the question of division of tax revenues between the centre and the state. Shri Deshmukh gave his Award in January 1950.

The Award determined the division of income tax and net proceeds between the centre and the states. The Award remained in force till Finance Commission was set up under Article 280 of the Indian Constitution.

8.3 TAXATION POWER

Division of Resource Raising Powers:

To meet the expenditures involved in the performance of functions, the governments at different levels have been assigned powers to raise resources.

Receipts of Central Government:

There are various sources of receipts of the central government classified into revenue receipts and capital receipts. Among the revenue receipts the most important is the tax revenue. A part of the tax receipts is statutorily transferred to the states as per the recommendations of the Finance Commission. The various types of taxes allotted to the centre may be listed under three categories:

1. Taxes on income and expenditure, which include income tax, corporation tax and expenditure tax.
2. Taxes on property and capital transactions which cover estate Taxes property duty, wealth tax etc.
3. Taxes on commodities: A major change in the indirect tax structure was made with the implementation of The Goods and Services Tax

(GST) on 1 July 2017. Since GST is a destination-based tax, an end user consuming any goods or services is liable to pay it. The tax is received by the State in which the goods or services are consumed and not by the state in which such goods are manufactured. GST have following three types.

1. Central GST (CGST) is a tax levied on intra-state supplies of both goods and services by the central government and governed by the CGST Act.

2. State GST (SGST) will also be levied on the same intra-state implies that both the Central and the State governments will agree on combining their levies with an appropriate proportion for revenue sharing between them.

3. Integrated GST (IGST) is a tax levied on all inter-state supplies of goods and services and will be governed by the IGST Ad Tax will be shared between central and state governments.

Apart from tax revenue there are other sources of revenue receipts. These include dividends from railways, posts and telegraphs, RBI, public sector undertakings and interest receipts on loans given to states.

As regards capital receipts, the government has the legal power to borrow from the domestic as well as the international markets, as also from world institutions and foreign governments.

Receipts of State Government: Like those of the Centre, receipts of states are classified into revenue and capital receipts. The revenue receipts come mainly from taxes on agricultural income, profession tax, property and capital transactions like stamp and registration, land revenue, urban immovable property tax and surcharge on cash crops. Besides

8.4 EXPENDITURE RESPONSIBILITIES

Division of Functions: The principle underlying the division of functions assigns Countrywide tasks to the centre and state/region. Similarly, the tasks of local importance are assigned to municipalities in towns and panchayats in villages.

A. Central Government Functions: The several functions of the central government are classified into developmental and non-developmental functions. Developmental functions are the ones which promote growth and welfare of the people, for e.g., provision of social and community services (education, public health, science and technology, labour and employment etc.); economic services (agriculture and allied services, industry and minerals, transport and communications, foreign trade etc.); and grants in aid to states for developmental purposes. Non-developmental functions include maintenance of law and order (police, defence);

maintenance of external relations; grants to states for non-developmental purposes.

B. State Government Functions: The various responsibilities of the states are also grouped under two categories: developmental and non-developmental. Developmental functions include: social and community services; economic services etc. Non-developmental functions include administrative services, payment of pensions, interest payments on loans.

Justification for the Division:

1. Defence and communication services 'are to be provided uniformly throughout the country and thus should be the responsibility of the centre.
2. Benefits accrue due to economies of scale in the provision of these services due to the large size of the country.
3. Critical areas such as foreign investment and foreign trade which require a national agenda, are with the centre.
4. Further, services which differ from region to region like agriculture, are assigned to the states.

Problems:

The existing division of functions has the following problems:

1. There is over lapping of functions in important areas like education and health. required freedom and autonomy to the regions in respect to their designing and implementation and thus do not benefit the targeted groups.
2. Many of the centrally sponsored schemes do not provide the required freedom and autonomy to the regions in respect to their designing and implementation and thus do not benefit the targeted groups.

8.5 INTERGOVERNMENTAL TRANSFER

In spite of the clear-cut division of the powers and the financial resources between the central and states, there is an imbalance in the division of resources, this imbalance is in favour of the Centre. increased over the years, their revenue resources have not increased substantially.

Transfer of Resources from Centre to States:

The constitution itself has recognised the finance inadequacy of states and, therefore, the constitution has made a provision for the transfer of resources from the centre to states. These transfers are of three types:

1. Transfer of a part of tax proceeds from centre to the states. This is done through the agency of Finance Commission.
2. Transfer in the form of grants and loan from centre to states. These too are done through the Finance Commission.

3. Transfer in the form of plan assistance for plan projects. This takes place through the planning commission.

The above scheme of transfer does not solve the problem of financial imbalance

Finance Commissions:

Article 280 of the Constitution of India has made provision for the appointment of a Finance Commission. The Finance Commission (Miscellaneous Provisions) Act was passed in 1951. According to the provisions of the Act, the Commission is appointed every five years. It includes a chairperson and four other members.

The functions of the Finance Commissions are:

- (a) To recommend the distribution of net tax proceeds and allocation of shares of such proceeds between the Union and the States.
- (b) Grants-in-aid recommendations for covering the gap between current revenues and expenditures of the States, and for removal of regional disparities between the States. The Commission also recommends special purpose grants to a State.
- (c) The Finance Commission may look into and study specify. problems and issues in the interest of healthy and sound financial relations between the Centre and States, on the advice of the President. These issues include extent of indebtedness of States, debt relief measures and special expenditures required to be made by States.

So far 14 Finance Commissions have been constituted. The 14th Finance Commission was constituted in January 2014 under the chairmanship of Dr. Y.V. Reddy, former governor of the RBI. The Commission submitted its report to then President Pranab Mukherjee in December 2014. The Government of India has accepted the recommendations of the Commission for the period 2015-16 to 2019-20. Some of the major recommendations of the 14th Finance Commission that have been accepted by the Government of India are:

1. States' share in the net proceeds of Union tax revenue to be increased from previous 32% to 42%.
2. Eight Centrally Sponsored Schemes (CSS) delinked from the Centre support. 30 such CSS have been identified, but have not yet been delinked from Centre support due to national priorities and legal obligations. CSS are special purpose grants or loans given by Central Government to State Governments to plan and implement programmes to help achieve national goals and objectives. Some examples of CSS are Jawaharlal Nehru National Urban Renewal Mission (JNNURM), Rashtriya Krishi Vikas Yojana, Sarva Shiksha Abhiyan, National Mission on AYUSH.
3. States to share higher fiscal responsibility for the existing CSS

4. Revenue compensation to States under GST should be for five years; 100% in first three years, 75% in fourth year and 50% in the fifth year. States are expected to have lower tax collection due to imposition of GST.
5. An autonomous and independent GST Compensation Fund be created.

8.6 VAT, GST

8.6.1 VAT:

VAT is a multi-stage tax levied at each stage of the value addition chain, with a provision to allow input tax credit (ITC) on tax paid at an earlier stage, which can be appropriated against the VAT liability on subsequent sale.

VAT is intended to tax every stage of sale where some value is added to raw materials, but taxpayers will receive credit for tax already paid on procurement stages. Thus, VAT will be without the problem of double taxation as prevalent in the earlier Sales tax laws.

Presently VAT is followed in over 160 countries. The proposed Indian model of VAT will be different from VAT, as it exists in most parts of the world. In India, VAT has replaced the earlier State sales tax system.

One of the many reasons underlying the shift to VAT is to do away with the distortions in our earlier tax structure that carve up the country into a large number of small markets rather than one big common market. In the earlier sales tax structure tax is not levied on all the stages of value addition or sales and distribution channel which means the margins of distributors/ dealers/ retailers at large not subject to sales tax earlier.

Thus, the sales tax pricing structure needs to factor only the single-point levy component of sales tax and the margins of manufacturers and dealers/ retailers etc, are worked out accordingly. Internal trade and impeded development of a common market. Prices by an amount higher than what accrues to the exchequer by way of revenues from it.

Also, there was the problem of multiplicity of rates. All the states, provided for plethora of rates. These range from one to 25 per cent. This multiplicity of rates increases the cost of compliance while not really benefiting revenue.

Heterogeneity prevailed in the structure of tax as well. Apart from general sales tax, most states used to levy an additional sales tax or a surcharge. In addition, the states levied luxury tax as also an entry tax on the sale of imported goods.

All these practices of heterogeneity in structure as well as rates cause diversion of trade as well as shifting of manufacturing activity from one

State to another. Further, widespread taxation of inputs relates to vertical integration of firms, i.e., the earlier system of taxes militated against ancillary industries and encourages them to produce more and more of the inputs needed rather than purchase them from ancillary industries.

The earlier system of commodity taxes is non-neutral. It interferes with the producers' choice of inputs as well as with the consumers' choice of consumption, thereby leading to severe economic distortions.

8.6.2 GST:

Background of GST A comprehensive GST based on the Value Added Tax (VAT) principle was first suggested by the Kelkar Task Force in December 2002. The introduction of GST in India was first announced in the Union Budget 2006-07. Since then, the Empowered Committee of Ministers had worked on preparing the back ground material for GST and the draft GST Acts. Implementation of GST finally materialised with the Parliament passing the Constitutional Amendment Act in September 2016, followed by the State Legislatures and GST was rolled out with effect from 1 July 2017 (including Jammu and Kashmir with effect from 8 July 2017).

As stated by the President of India Sri Pranab Mukherjee on the launch of GST from the Central Hall of Parliament on 30 June 2017, “GST is the result of a broad consensus arrived at between the Centre and the States and is a tribute to the maturity and wisdom of India’s democracy”.

Definition of GST:

GST is a tax on supply of goods or services or both and a single tax on entire value chain of supply, right from the manufacturer to the consumer. Credit of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages. GST is a consumption-based tax i.e., tax accrues to the State where goods and / or services are finally consumed.

There are three components of GST as follows: -

- Central Goods and Services Tax (CGST): payable to the Central Government on supply of goods and services within the State/Union Territory.
- State/Union Territory Goods and Services Tax (SGST/UTGST): payable to the State/Union Territory Government on supply of goods and services within the State/Union Territory.
- Integrated Goods and Services Tax (IGST): in case of inter-state supply of goods and services, IGST is levied by the Government of India. Equivalent IGST is also levied on imports into India. IGST shall be apportioned between the Union and the States as per the provisions of IGST Act.

- **GST Compensation Cess:** In addition to GST, a cess named GST Compensation Cess can be levied on notified goods and services and currently such cess is levied on pan masala, tobacco, aerated drinks, cars and coal.

Taxes submerged in GST:

A. Central Taxes:

1. Central Excise Duty (except five Petroleum and tobacco products)
2. Service Tax.
3. Counter vailing duties on Customs.
4. Additional duties of excise on Duty of goods of special importance.
5. Additional duties of excise on Textiles and textile articles.
6. Special Additional duty on Customs.
7. Excise Duty on medicinal and Toilet preparation.

B. State Taxes:

1. State Value Added Tax (VAT)/Sales Tax (except five petroleum products and alcoholic liquor for human consumption)
2. Entertainment Tax (other than the tax levied by the local bodies)
3. Central Sales Tax (levied by the Centre and collected by the States)
4. Octroi and Entry tax
5. Purchase tax
6. Luxury tax
7. Taxes on lottery, betting and gambling

Key legislations:

The Constitution (One Hundred and Twenty Second Amendment) Bill, 2016, for introduction of Goods and Services Tax in the country was passed by Rajya Sabha on 3 August 2016 and by Lok Sabha on 8 August 2016. Consequent upon this, the President of India accorded assent on 8 September 2016, and the same was notified as the Constitution (One Hundred and First Amendment) Act, 2016. The following Acts were passed for implementation of GST with effect from 1 July 2017: -

- The Central Goods and Service Tax Act, 2017;
- The Union Territory Goods and Service Tax Act, 2017.
- The Integrated Goods and Service Tax Act, 2017;
- The Goods and Service Tax (Compensation to States) Act, 2017

The above Acts were assented by the President of India on 12 April 2017 and enacted with effect from 21 July 2017. In addition to the above, each of the States have also passed the SGST Act.

All the above Acts were further amended vide the CGST Amendment Act, 2018 and the GST (Compensation to States) Amendment Act, 2018, the IGST (Amendment) Act, 2018 and the UTGST (Amendment) Act, 2018 notified on 29 August 2018 and made effective from 1 February 2019.

Goods and Service Tax Council:

In terms of Article 279A (1) of the Constitution of India, as amended, the President of India constituted the GST Council with effect from 12 September 2016. The GST Council is a constitutional body for making recommendations to the Union and the State Governments on the issues related to GST. The GST Council, a joint forum of the Centre and the States, is chaired by the Union Finance Minister and members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation or any other Minister nominated by each of the States. As per Article 279A (4), the Council will make recommendations to the Union and the States on: -

- a) The taxes, cesses and surcharges levied by the Union, the States and the local bodies which may be subsumed in the GST;
- b) The goods and services that may be subjected to, or exempted from GST;
- c) The model GST Laws, principles of levy, apportionment of GST levied on inter-State trade supplies and the principles that govern the place of supply (POS);
- d) The threshold limit of turnover below which goods and services may be exempted from GST;
- e) The rates including floor rates with bands of GST;
- f) Any special rate or rates for a specified period, to raise additional resources during any natural calamity or disaster;
- g) Special provision with respect to the States of Arunachal Pradesh, Assam, Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Himachal Pradesh and Uttarakhand; and
- h) Any other matter relating to the GST, as the Council may decide.

While discharging the functions conferred by this article, the GST Council shall be guided by the need for a harmonised structure of goods and services and for the development of a harmonised national market for goods and services.

Goods and Services Tax Network:

Goods and Services Tax Network (GSTN) was registered on 28 March 2013 under Section 8 of the Companies Act, 2013 as a Non-Government Company and a 'Not for Profit Organisation'. It was formed to provide common and shared Information Technology (IT) infrastructure and services to the Central and State Governments, taxpayers and other stakeholders for implementation of the GST. The Government of India holds 24.5 per cent equity in GSTN and all the States of the Indian Union,

including NCT of Delhi and Puducherry and the Council, together hold another 24.5 per cent. The balance 51 per cent equity is with non-Government financial institutions. It was decided (May 2018) to convert GSTN into a fully owned Government Company. Further action on this decision was yet to be taken by the Government.

8.7 SUMMARY

A federation is a form of government in which the sovereign or political power is divided between the central and the state or local governments such that each government, within its own sphere, is independent of the other. India is a 'federal republic' and this provision is enshrined in the country's Constitution. The financial powers and responsibilities of the different government units have been clearly defined in the Indian Constitution. But Indian federal system has long history. In 1833, the financial system was completely centralised by a Charter Act of British Government which provided for the appointment of the Governor of Bengal as the Governor-General of India and the Governors in different states were made subordinate to him for financial matters. In 1873 the provinces were given fixed grants by the central government to enable them to cover their expenses. The movement towards the system of financial decentralisation in the country was further consolidated under the Montagu-Chelmsford Reforms which took practical shape in the form of Government of India Act, 1919. According to the Act of 1935, there was a complete separation of federal and provincial sources of revenue. The Constitution of India made the same financial provisions as were provided in the Government of India Act, 1935. As a Finance Commission could be set up only after the Constitution came into force on 26 January 1950. In India taxation powers divided into parts: Central government and state government. Also, expenditure responsibility also divided in same parts. Also, there are some transfers of funds. Over a period of time the taxation system also changed and developed.

8.8 QUESTIONS

1. Explain the need for financial regulations.
2. Explain the need for FRBM Act.
3. Explain the structure of financial federation in India.
4. Explain the difference between value added tax and goods and services tax.
5. Discuss the need for decentralization and the Indian experience.

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