**PUBLIC ECONOMICS: THEORY AND POLICY**

**M.A. ECONOMICS**

**III Semester (Hardcore Course)**

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**Module-1**

**Overview of the Public Sector**

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* Principle of Maximum Social Advantage
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**OVERVIEW OF THE PUBLIC SECTOR**

**INTRODUCTION:**

Public Economics as a science which deals with economic activities of the government, which have grown out of not only the failures of the market but also from the failures of the government. Public sector economics is concerned with justifying the existence of governments and explaining how they can affect economic activity. It explains how the ‘invisible hand’ of the market is tempered by the ‘visible hand’ of government in the mixed economy of both private and public sectors adopted by the vast majority of nations.

**OBJECTIVE OF PUBLIC ECONOMICS:**

* The satisfaction of collective wants
* To ensure economic growth
* To influence on the distribution of income
* To assure high rate of employment rate
* Satisfactory external trade balance
* A stable price level
* Efficient use of natural resources

**Three Normative Aspects of Public Sector Economics**

1. Public expenditure theory

* What government expenditures do we expect, and why?

How should government carry out its desired functions?

1. Theory of taxation

* What principles should guide design of government tax policy

1. Theory of fiscal federalism

**What are the Legitimate Economic Functions of a Government?**

Depends on chosen economic system,

* **Centrally Planned Socialism:** Government owns all resources and makes all important economic decisions (Least individual freedom)
* **Decentralized Capitalist Economy:** Limited government; individuals and firms make all important economic decisions (Most individual freedom)

**What Economic Functions Should Government Provide?**

* Should honor consumer and producer sovereignty (humanism)
* Government should intervene in cases of market failure
* The correct definition of market failure is the main issue over which Liberals and Conservatives disagree.
* Both sides do agree that government should not intervene in markets that are functioning well.

**Two Goals of Public Economics:**

**Efficiency**

* Efficiency is mainly a positive concept
* Economists measure efficiency asPareto Optimality

**Equity (Fairness)**

Equity is mainly a normative concept

* Whether outcomes are fair.
  + For example: Is it fair that over half of income in India goes to 20% of households? If not, what should be done to correct it?
* Whether rules determining process are fair, regardless of allocation.
  + For example: Do children of wealthy families start with an advantage due to their family’s wealth? If so, then what should be done to level the playing field?

**WHAT IS PUBLIC FINANCE?**

In Common Parlance, public finance is the study of finance related to government entities. It revolves around the role of government income and expenditure in the economy.

Prof. Dalton in his book Principles of Public Finance states that “Public Finance is concerned with income and expenditure of public authorities and with the adjustment of one to the other”

By this definition, we can understand that public finance deals with income and expenditure of government entity at any level be it central, state or local. However in the modern day context, public finance has a wider scope – it studies the impact of government policies on the economy.

**Instruments of Public Economics:**

* Instruments of fiscal policy
* Instruments of monetary policy
* Direct interference through orders and prohibition
* The government’s own business activity

## THE SCOPE OF PUBLIC FINANCE (Or the field of public finance)

Prof. Dalton classifies the scope of public finance into four areas as follows –

### A. Public Income:

As the name suggests, public income refers to the income of the government. The government earns income in two ways – tax income and non-tax income. Tax income is easy to recognize, it’s the tax paid by people of the country in the form of income tax, sales tax, duties, etc. On the other hand non-tax income includes interest income from lending money to other countries, rent & income from government properties, donations from world organizations, etc. This area studies methods of taxation, revenue classification, methods of increasing government revenue and its impact on the economy as a whole, etc.

### B. Public Expenditure:

Public expenditure is the money spent by government entities. Logically, the government is going to spend money on infrastructure, defense, education, healthcare, etc. for the growth and welfare of the country. This area studies the objectives and classification of public expenditure, effects of expenditure in different areas, effects of public expenditure on various factors such as employment, production, growth, etc.

**C. Public Debt:**

When public expenditure exceeds public income, the gap is filled by borrowing money from the public, or from other countries or world organizations such as The World Bank. These borrowed funds are public debt. This area of public finance explains the burden of public debt, why it is necessary and its effect on the economy. It also suggests methods to manage public debt.

**D. Financial Administration:**

As the name suggests this area of public finance is all about the administration of all public finance i.e. public income, public expenditure, and public debt. Financial administration includes preparation, passing, and implementation of government budget and various government policies. It also studies the policy impact on the social-economic environment, inter-governmental relationships, foreign relationships, etc

**E. Federal Finance:**

As in the case of India, existence of multi-level system of government requires a corresponding division of functions and resources between different layers as also issues and problems relating to inter-governmental financial flows, financial imbalances and their rectification. In modern days, appropriation and allocation of resources in the federal system of government is the key study area of public economics.

**PRIVATE AND PUBLIC INTEREST**

In modern economies, the allocation of scarce resources is mainly coordinated by the market. In theory, this allocation of resources is [optimal](https://en.wikipedia.org/wiki/Optimal), but these conditions are frequently not complied in practice. The allocation of resources is not optimal and there is need for methods for improving the allocation. One of the methods for achieving efficiency in the allocation of resources is government regulation.

According to public interest theory, government regulation is the instrument for overcoming the disadvantages of imperfect competition, unbalanced market operation, missing markets and undesirable market results.

Public Interest Theory is a part of [welfare](https://en.wikipedia.org/wiki/Welfare) economics and emphasizes that regulation should maximize social welfare and that regulation is the result of a cost/benefit analysis done to determine if the cost to improve the operation of the market outweighs the amount of increased social welfare.

According to the public interest model, government tries to enact laws, regulations, and policies that benefit the public. The private interest (or public choice) model, by contrast, suggests that government officials enact laws that are in their own private interest.

The theory of public interest regulation prevailed up to the 1960s until public choice theory launched its critical attack on established theory. While there is no pointed origin or categorical articulation of this theory, its notions can be traced back to works of [Arthur Cecil Pious](https://en.wikipedia.org/wiki/Arthur_Cecil_Pigou) related to his analysis of externalities and welfare economics. This theory was prevalent, especially during the New Deal progressive era, as stated above, starting the 1960s; economists of the Chicago school began critiquing the assumption of benevolent regulators, proposing counter theories, like the [Public choice theory](https://en.wikipedia.org/wiki/Public_Choice_Theory), which is based on personal-interests of agents.

* According to the public interest model, government tries to enact laws, regulations, and policies that benefit the public.
* The private interest (or public choice) model, by contrast, suggests that government officials enact laws that are in their own private interest.
* It is important to know which model is a more accurate description of reality because the models have very different implications for our attitudes toward regulation.
* If one believes the public interest model is usually correct, then one will be more likely to call for government regulation, even if one admits that regulatory goals may in fact be difficult to achieve regardless of the intentions of politicians and bureaucrats.
* If one believes the private interest model is a more accurate depiction of the real world, one will be more skeptical of government regulation.
* Asymmetric information creates a principal-agent problem between the public and elected officials, another principal-agent problem between those officials and regulators, and yet another principal-agent problem between regulators and banks (and other financial firms) because in each case, one party (politicians, regulators, banks) knows more than the other (public, politicians, regulators).
* So there are at least three places where the public’s interest can be stymied: in political elections, in the interaction between Congress and the president and regulatory agencies, and in the interaction between regulators and the regulated. And that’s ignoring the often extensive agency problems found within governments, regulatory agencies, and financial institutions
* Traditionally, public interest is considered one of the criteria for differentiating between the sphere of private law and that of public law.
* A public-interest view of government is probably most often a normative theory of government rather than a positive theory. It appeals to those who want to discuss how the government ought to act, and appears often in political rhetoric.
* The government decisions are commonly thought to be motivated by noble social concerns like helping the poor, protecting the environment, improving education, and promoting economic growth. Of course, government decisions are made by people, just as market decisions are, but supposedly when people move from market roles to political roles they experience a moral metamorphosis, discarding their private interest to better promote the public interest.

**INDIVIDUAL RIGHTS AND SOCIAL RESPONSIBILITY:**

Rights and obligations in the community are essential for peaceful living in any economies. Balanced rights and obligations for the individuals is a crucial component towards the nations achieving its goals. When the rights of individuals are respected, then they perform exceptionally well in the duties which they are assigned. Human rights will enable individual work and live in an environment which is free from discrimination and the ability to get all the basic needs. Human rights entail the freedom of an individual to perform and pursue life and goods without any interference.

Individual Rights Definition: An individual right is a person’s freedom to act in a social environment. It can also be defined as any action or behavior that individuals can freely undertake.

Rights are essential for a society to function properly. They are normally set by laws and enforced by the government. There are many different rights and democracy is the political system that protects basic these rights the most. When basic individual rights, such as the right to vote, to work, to live and to have a family among other fundamental rights, are prohibited or limited by a government the country might not be living under democratic principles. Under these circumstances, individual rights are normally not guaranteed, unprotected or unenforced, which leads to abuses and harsh living conditions for citizens. Countries with limited individual rights will experience social turmoil and violence more often than democratic countries, since there is social unrest. In India, individual rights are guaranteed by the Indian Constitution. In the workplace, individual rights have to be protected when it comes to racial and gender discrimination, equal treatment and basic work conditions, among others.

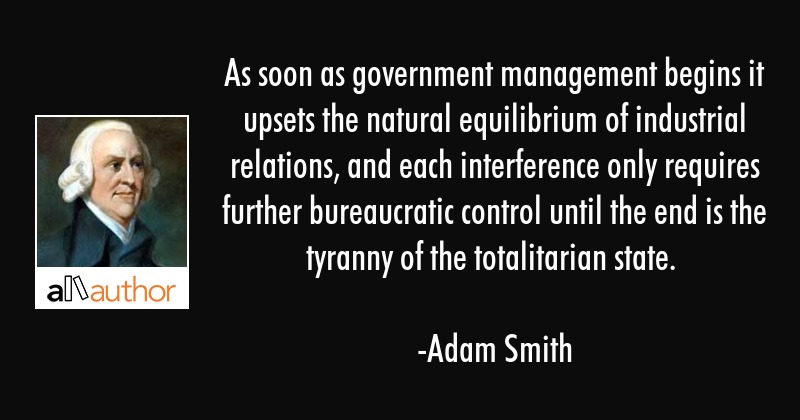
**Social or Community Responsibility:**

Social responsibility is an ethical theory in which individuals are accountable for fulfilling their civic duty, and the actions of an individual must benefit the whole of society. In this way, there must be a balance between economic growth and the welfare of society and the environment. If this equilibrium is maintained, then social responsibility is accomplished.

A community is a group of people with common interests and values. Community is characterized by "wholeness incorporating diversity" and may include people of different ages, ethnicities, educational backgrounds and incomes (Gardner 2003). Community responsibilities are an individual's duties or obligations to the community and include cooperation, respect and participation. The concept goes beyond thinking and acting as individuals to common beliefs about shared interests and life.

Each individual is part of a larger community. Family, neighbors, tribe, village, city, county, state, region, country and the world form a larger community in the life of every human being. At the same time, full human potential cannot be reached if individuality is suppressed by society. In all free societies there is a constant and unavoidable tension between rights and responsibilities. Every right has a corresponding duty. It is the responsibility of the individual to watch over a community to make sure that standards are objective and beneficial to human life (Machan 2001).

**ADAM SMITH’S ROLE OF GOVERNMENT:**



#### The Allocation Function and the Role of Government

* Protect society from external violence and invasion
* Establish a system of justice to provide internal law and order, to protect property
* Establish and maintain beneficial public institutions (public works) that can’t be provided on a profitable basis
* Maintain a sovereign government

Adam Smith believed that, "Government should limit its activities to administer justice, enforcing private property rights and defending the nation against aggression."

Adam Smith stated that the free market is guided by an invisible hand and less government intervention in some special area that could be efficient. He identified three major duties for government, national defense, administration of justice, and the provision of public goods.

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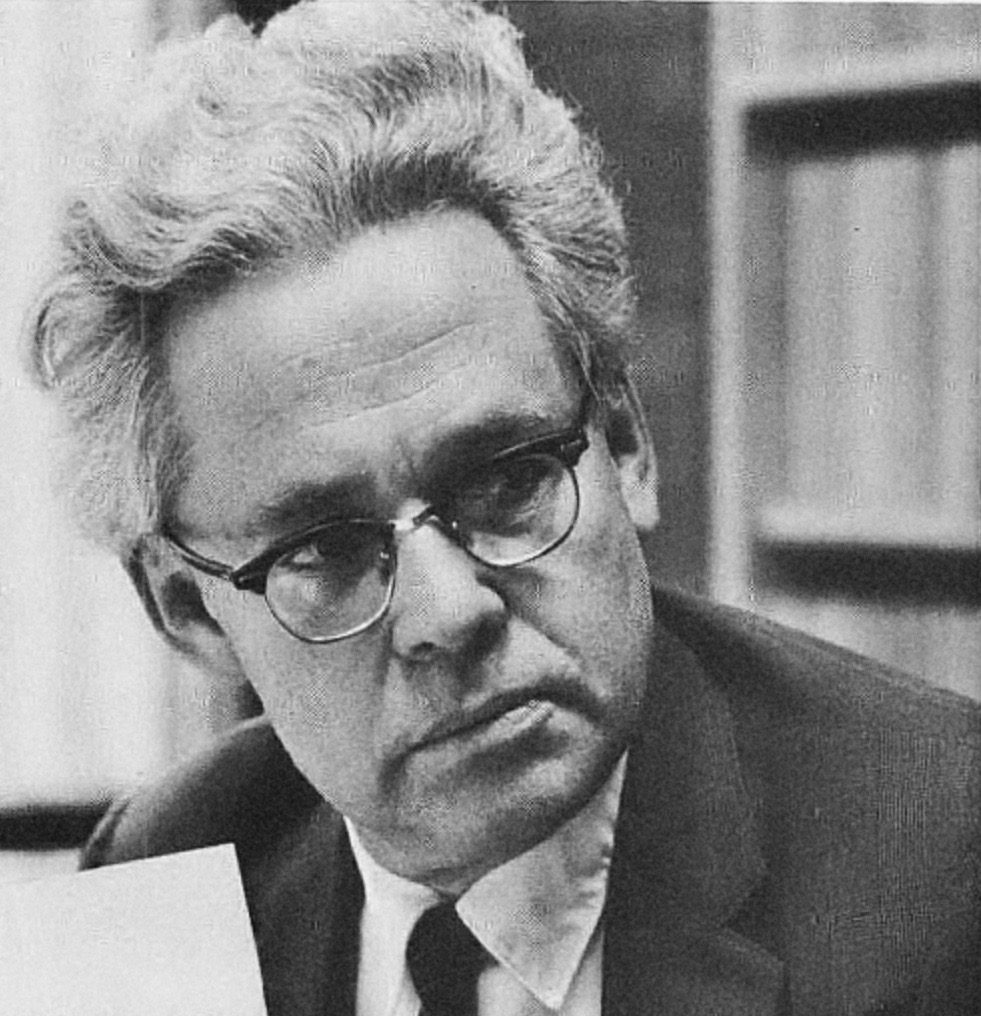
**Role of Government: Smith’s View**

* The father of capitalism in his famous book, The Wealth of Nation, stated three ideal functions that should be performed by government. In his classic work, the first function of government is to create the internal Social Security regulations and also provide national defense for protecting the society and all citizens from all the violence and invasions or attacks forces from other societies.
* Secondly, the function of establishing an exact administration of justice in the context of order and law.
* Thirdly, the function of providing public goods and maintaining the related public Institutes which it can be never for the interest of any specific individual or definite groups.
* He believed that the economy should be allowed to run on its own using free market forces and without any government intervention. In his opinion, the economy could create wealth and improve efficiency through the invisible hand.
* He argued that any government intervention will weaken the economy. Adam Smith believed that invisible hand is a natural phenomenon that guides the market through competition for scarce resources. He believed that human wants are unlimited but human needs are limited, and people can compete with each other, then existence of competitive is the necessary condition for free market.
* With government intervention, people would stop competing, and in turn it causes that prices increases and quality decreases.
* Adam Smith referred to laissez - faire and the natural liberty concept which the latter relates the individual liberty to the positive economic outcomes. He argued that government interference in the economy will damage the nation's wealth, and then insisted to the elimination of these interventions as restrictions.
* It is pointed out that progressive tax is the only source of revenue for governments and all public expenditure was to be paid from tax collection on the high - income households or rich people and their maintenance financed by user - charges of public facilities for the financing of repairs to roads and bridges and paying for medical care to the people who suffers from diseases..
* Government must develop the postal service for public use, and provide the other services, and also it should be run an official mint to guarantee the purity of the coinage.
* It is clear that central bank (The Bank of England at that time), should manage government and introduce necessary regulations in order to stop extra spending by monetary tools (issues bonds or using liquidity).
* In fact, the fathers of economics suggest the appropriate involvement in the economy for government. There were some notions as the balance of trade required to be positive in favor of exports, so that a nation could accumulate stocks of gold. Therefore, trading policies of protection against imports were developed, and supported by tariffs and prohibitions, and then the price of goods allowed to be higher than importing them, and of course following these kind of polices destroyed the relations between nations and created many conflicts and wars between them.
* Adam Smith rejected with this kind of government interventions in the economy, because he wanted to use the mutually advantages trade between nations. In his sense, each country had its absolute advantage and relative advantage in producing goods than the other country, and then they have their specific technology and innovations which can obtain them with peaceful trading countries. The nations will lost the opportunities with imposing tariffs or restrictions in their trading with other nations, and Smith disagreed with the similar interventions by government in this area.
* He argued that this kind of interventions in economy and imposing tariff policy on trade is a high price that tends not to compensate. Of course, there are many political factor that contribute to an individual or a country becoming rich or poor, and decreasing its share in the trade, and it needs more scrutiny.
* The father of economics explained that government and its high interference in the economy is a violation of natural liberty, but it introduced for pursuing policies related to progress of the economy like development of trade, but because of creating many consequences, it became a big obstacle to the development of free trade, and creating two poles of rich and poor countries makes it extremely difficult.
* Adam Smith observed all bad effects from government interference in the economy and then opposed all of them, and limited the role of government in the economy.
* Adam Smith expected that government should leave the economy alone and not involve with the natural liberty of free market and free trade. He was concerned about the government performance in granting the special privileges to some manufacturers and merchants in production and trade respectively.

**Conclusion:**

The father of economics has considered three major and efficient roles for government, national defense, administration of justice, and the provision of public goods. He disagreed with all disturbing factors that destroyed the equilibrium in free market. In economics, the equilibrium is a state where supply and demand are equaled in there, and it happened when a market price is established by competition and without existence of monopolies. When government intervenes too much in free market, then people expect to see many monopolies in the economy which perform in a shadow economy. Adam smith disagreed with excessive government interventions in the economy, but at the same time considered three special functions for government, which could be effective in its place.

**MUSGRAVE’S ECONOMIC ROLE OF GOVERNMENT:**

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**Richard A. Musgrave**

Richard A. Musgrave, widely regarded as the founder of modern public finance believed that government can play a positive and constructive role in society, Musgrave also believed deeply that economists can contribute to making government work well, thereby contributing to a better society.

Musgrave (1959) theorized three functions of government: allocating public goods, redistributing income, and stabilizing the economy.

## Functions of Government: Musgrave’s View

There are three main functions of government as follows –

### 1. The Allocation Function:

The allocation function deals with the allocation of such public goods. The government has to perform various functions such as maintaining law and order, defense against foreign attacks, providing healthcare and education, building infrastructure, etc. The list is endless. The performance of these functions requires large scale expenditure, and it is important to allocate the expenditure efficiently. The allocation function studies how to allocate public expenditure most efficiently to reap maximum benefits with the available public wealth.

* The government provides certain public goods and services which the private sector fails to provide because there exists no market for them. Example: National Defence, Public Parks and National Highways etc.
* The reason of government providing such goods is the nature of public goods. The public goods are by nature non-rival and non-excludable.
* Non-Rivalry means, the consumption of the good by one individual does not stop another individual from consuming the same good. The goods remain available to all the citizens.
* Non-Excludability means the government cannot exclude any person from enjoying the benefit of the good whether they pay or not. The goods are non-excludable in nature.

### 2. The Distribution Function:

There are large disparities of income and wealth in every country in the world. These income inequalities are the plague to the society and increase the crime rate of the country. The distribution function of public finance is to lessen these inequalities as much as possible through redistribution of income and wealth.

* The government through its tax and expenditure policies attempts to bring out income redistribution in the society that is fair to all.
* The government transfer payments from one citizen to other through taxation policy. Example: Old age pensions, Social sector initiatives for the poor. Through these programs, the government provides income support to those individuals who do not have any source of earnings. The funds for running these programs come from progressive taxation. Those are with higher income pays higher taxes.
* The idea of distribution is not to rob the rich by forcing them to pay high taxes or to discourage people from earning more but to make just redistribution which will be equitable for all.

**3. The Stabilization Function:**

Every economy goes through periods of booms and depression. It’s the most normal and common business cycles that lead to this scenario. However, these periods cause instability in the economy. The objective of the stabilization function is to eliminate or at least reduce these business fluctuations and its impact on the economy. Policies such as deficit budgeting during the time of depression and surplus budgeting during the time of boom help the government to achieve the required economic stability.

* The economy tends to undergo periods of instability and fluctuations. The periods of fluctuations require the government to play an active role in removing it.
* The year of 2008-09 witnessed the Global Financial Crisis. The GFC led to a decline in GDP growth rate along with employment. To help recover economy from the GFC, the government provided Fiscal Stimulus package for the industry.
* Similarly, the economy may at times overshoot when expenditure becomes greater than output. In such a situation when consumers are spending more than what producer are willing to supply. Inflation happens. To remove inflationary pressure from the economy, the government intervenes through tight fiscal policy.

**Principle of Maximum Social Advantage:**

Prof. Hugh Dalton points out that **“in the sphere of public finance, we are still haunted by the superficial views and shallow percepts of an early age”.**

One of the important principles of public finance is the so – called Principle of Maximum Social Advantage explained by Professor Hugh Dalton. Just like an individual seeks to maximize his satisfaction or welfare by the use of his resources, the state ought to maximize social advantage or benefit from the resources at its command. The principles of maximum social advantage are applied to determine whether the tax or the expenditure has proved to be of the optimum benefit. Hence, the principle is called the principle of public finance.

According to Dalton, “This (Principle) lies at the very root of public finance” .He again says “The best system of public finance is that which secures the maximum social advantage from the operations which it conducts.” It may be also called the principle of maximum social benefit. A.C. Pigou has called it the principle of maximum aggregate welfare.

**The Principle States:**

The state should collect revenue and spend the money so as to maximize the welfare of the people. When the state imposes taxes, some disutility is created. On the other hand, when the state spends some money, there is gain in utility. The state should so adjust revenue and expenditure that surplus of utility is maximized and disutility is minimized.

**Attainment of Maximum Social Advantage Requires That;**

**1.**Both public expenditure and taxation should be carried out up to certain limits and no more.

2. Public expenditure should be utilized among the various uses in an optimum manner, and

3. The different sources of taxation should be so tapped that the aggregate scarifies entailed is the minimum.

**Assumptions of This Theory:**

1. All taxes result in sacrifice and all public expenditures lead to benefit.

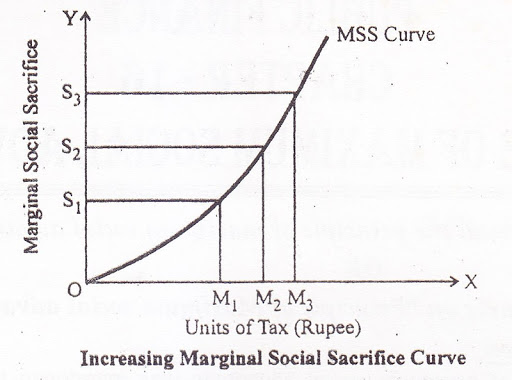
2. Public revenue consists of only taxes and there is no other source of income to the government.

3. The govt. has no surplus or deficit budget but only a balanced budget.

**Marginal Social Sacrifice (MSS)**

Marginal Social Sacrifice is the amount of social sacrifice undergone by public due to the imposition of an additional unit of tax. Every unit of tax imposed by the government taxes result in loss of utility.

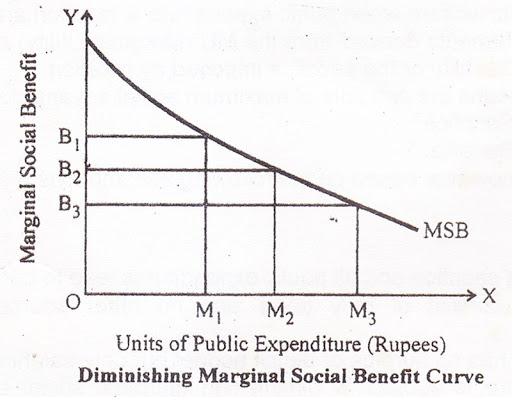
In Dalton words “Marginal Social Sacrifice refers to the additional burden (marginal sacrifice) resulting from additional units of taxation goes on increasing. Every additional unit of taxation creates greater amount of sacrifice on the society”.



The diagram elicit that the Marginal Social Sacrifice (MSS) curve rises upwards from left to right indicating that with each additional unit of taxation, the level of sacrifice also increases. When the unit of taxation was OM1, the marginal social sacrifice was OS1, and with the increase in taxation at OM2, the marginal social sacrifice rises to OS2.

**Marginal Social Benefit (MSB)**

Marginal Social Benefit is the benefit conferred on the society, by an additional unit of public expenditure\*. Just as the marginal utility from a commodity to a consumer declines as more and more units of the commodity are made available to him, the social benefit from each additional unit of public expenditure declines as more and more units of public expenditure are spent.

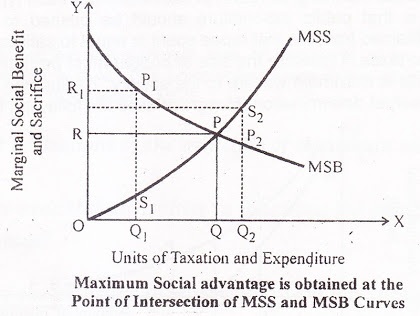
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In this diagram, the marginal social benefit (MSB) curve slopes downward from left to right indicated that the social benefit derived out of public expenditure is reducing at a diminishing rate. When the public expenditure was OM1, the marginal social benefit was OB1, and when the public expenditure is OM2, the marginal social benefit is reduced at OB2.

**The Point of Maximum Social Advantage: MSB=MSS**

Social Advantage is achieved at the point where the marginal social benefit of public expenditure and the marginal social sacrifice of taxation are equated, i.e. where MSB = MSS. This is the optimum limit of the states' public finance activity.

*\*Public Expenditure is subject to diminishing Marginal Social Benefit (MSB) and the taxes are subject to increasing Marginal Social Disutility or Sacrifice (MSS).*

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Social advantage is maximized at the point where marginal social sacrifice cuts the marginal social benefits curve. This is at the point P. At this point, the marginal disutility or social sacrifice is equal to the marginal utility or social benefit. Beyond this point, the marginal disutility or social sacrifice will be higher, and the marginal utility or social benefit will be lower. Before this point, the marginal utility or social benefit is more than marginal disutility or marginal sacrifice.

Thus, public expenditure should be incurred up to the point where the marginal utility due to public expenditure us just equal to the marginal disutility due to taxation of public income.

**Criticism of the Theory of Maximum Social Advantages**

1. **Non Measurability of Social Sacrifice and Social Benefit:**

The major drawback of this principle is that it is not possible in actual practice to measure the MSS and MSB involved in the fiscal operation of the state.

1. **Non Applicability of the Law of Equi-Marginal Utility in Public Expenditure:**

The law of equi-marginal utility may be applicable to private expenditure but certainly not to public expenditure.

1. **Neglect Non-Tax Revenue:**

The principle says that the entire public expenditure is financed by taxation. But, in practice, a significant portion of public expenditure is also financed by other sources like public borrowing, profits from public sector enterprises, imposition of fees, penalties etc.

1. **Lack of Divisibility:**

The marginal benefit from public expenditure and marginal sacrifice from taxation can be equated only when public expenditure and taxation are divided into smaller units. But this is not possible practically.

1. **Assumption of Static Condition:**

 Conditions in an economy are not static and are continuously changing. What might be considered as the point of maximum social advantage under some conditions may not be so under some other.

1. **Misuse of Government Funds:**

The principle of Maximum social advantage is based on the assumption that the government funds are utilized in the most effective manner to generate marginal social benefit. However, quite often a large share of government funds is misused for unproductive purposes

**7**. "The government has no surplus or deficit budget but only a balanced budget."- is an invalid assumption.

**Musgrave’s Views on Principle of Maximum Social Advantage:**

The principle of Maximum Social Advantage has been interpreted by economist Richard Musgrave who termed it as Maximum Welfare Principle of Budget Determination. According to Musgrave, the principle explains that taxation and public expenditure should be carried out up to that level where satisfaction obtained from the last unit of money spent is equal to the sacrifice from the last unit of money taken in terms of taxes. In other words, it should be carried out up to the point where marginal social benefit is equal to marginal social sacrifice.

According to Musgrave, Dalton has proposed two principles of budget policy.

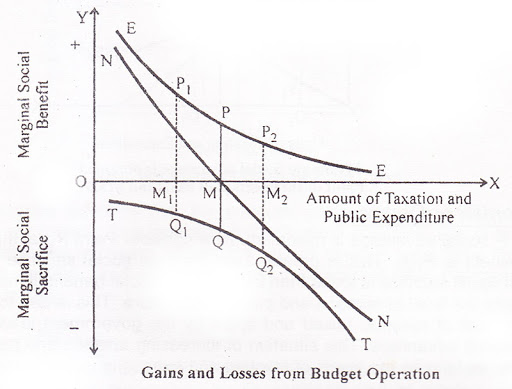
(1) Resources should be so distributed among different public uses so as to equalize the marginal return of satisfaction for each type of outlay.

(2) Public expenditure should be pushed to the point where the satisfaction lost from the last unit taken in taxes and the marginal satisfaction derived in public and private sector is equalized.

Therefore the size of budget must be determined in such a way so that it results in maximum social welfare to the society.

**Musgrave’s Optimum Budget Determination:**

To illustrate the Maximum Social Advantage Principle in the optimum budget determination, Musgrave uses the following diagram.



The 'Amount of Taxation and Public Expenditure' is measured on the X-axis, and on Y-axis, the 'Marginal Social Benefit' (MSB) is measured in the upward direction and the 'Marginal Social Sacrifice' (MSS) is measured in downward direction.

The 'Curve EE' indicating the marginal social benefit of successive units of public expenditure, allocated optimally between different public uses, slopes downwards from left to right due to diminishing marginal utility of social benefit.

The 'Curve TT' indicating the marginal social sacrifice of successive units of taxation imposed, shifts upwards from left to right due to increasing marginal disutility or social sacrifice.

The 'Curve NN' measures the net benefit derived from successive additions to the public budget (by way of taxation and public expenditure) and is arrived by deducting TT from EE.

The 'Optimum Size of Budget' is determined at OM, where marginal net benefits are nil. Therefore, the Government must fix the amount of taxes and public expenditure equal to OM. At point M, the maximum-sacrifice approach to the determination of taxes is matched by maximum-benefit approach to the allocation of public expenditure, and the two aspects are combined in a general theory of budget planning.

The optimum size of budget is at point M, because the marginal social benefit MP is equal to marginal social sacrifice MQ, i.e., MSB = MSS. Since MSB and MSS is measured in opposite directions (upward and downward), the marginal net benefit is nil. (MSB - MSS = 0). Therefore, the NN curve cuts the X-axis at point M.

At any point before M (i.e. M1), marginal social benefit (M1P1) will be greater than marginal social sacrifice (M1Q1) and marginal net benefits will be positive. Therefore, it would make sense to increase the taxation and public expenditure. Thus, there will be tendency to move towards point M.

At any point after M (i.e. M2), marginal social sacrifice (M2Q2) will exceed marginal social benefit (M2P2), and the marginal net benefits will be negative. Therefore, it would make sense to reduce the taxation and consequently reduction in public expenditure. Thus there will be a tendency to move towards point M. Thus, at point M, MSB = MSS. Therefore, according to Richard Abel Musgrave the optimum size of the budget is decided at a point where marginal net benefit is zero.

**Conclusion**

According to Musgrave the optimum size of budget is given by the point where marginal net benefit is zero. This point corresponds to the point of maximum social advantage as at this point MSB = MSS.

**Fundamental Theorems of Welfare Economics**

Welfare economics is the systematic method of evaluating the economic implications of alternative resource allocations. Welfare analysis answers the following questions:

i) Is a given resource allocation efficient?

ii) Who gains and who loses under various allocations, and by how much?

Such as externalities, public goods, economies of scale, and imperfect information—every competitive equilibrium is Pareto optimal. The second fundamental theorem states that every Pareto-optimal allocation of resources is equilibrium for a perfectly competitive economy, provided a redistribution of initial endowments and property rights is permitted;

There are two fundamental theorems of [welfare economics](https://www.policonomics.com/welfare-economics/).

The first states that in [economic equilibrium](https://en.wikipedia.org/wiki/Economic_equilibrium), a set of complete [markets](https://en.wikipedia.org/wiki/Market_(economics)), with [complete information](https://en.wikipedia.org/wiki/Complete_information), and in [perfect competition](https://en.wikipedia.org/wiki/Perfect_competition), will be [Pareto optimal](https://en.wikipedia.org/wiki/Pareto_optimal) (in the sense that no further exchange would make one person better off without making another worse off).

**The Requirements (Conditions) for Perfect Competition:**

It is proved that perfect competition in the market satisfies Pareto’s optimum condition of exchange, that is

1. MRSXY of any pair of individuals under it is the same.

2. Pareto’s optimum condition of production, i.e., MRTSLK of any pair of firms using the two factors for producing products under it is the same.

3. Pareto’s condition for optimal direction of production (i.e., optimum product mix), namely, MRTxy in production equals MRSxy of consumers.

4. There are no [externalities](https://en.wikipedia.org/wiki/Externality) and each actor has [perfect information](https://en.wikipedia.org/wiki/Perfect_information).

5. Firms and consumers [take prices](https://en.wikipedia.org/wiki/Price-taking) as given (no economic actor or group of actors has [market power](https://en.wikipedia.org/wiki/Market_power)).

The theorem is sometimes seen as an analytical confirmation of [Adam Smith](https://en.wikipedia.org/wiki/Adam_Smith)'s "[invisible hand](https://en.wikipedia.org/wiki/Invisible_hand)" principle, namely that competitive markets ensure an efficient allocation of resources. However, there is no guarantee that the Pareto optimal market outcome is socially desirable; as there are many possible Pareto efficient allocations of resources differing in their desirability (e.g. one person may own everything and everyone else nothing).

The first theorem of welfare economics is based on the two assumptions:

1. In the economy, all commodities are competitive. The equilibrium in the economy is Pareto efficient.

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

The second theorem states that any Pareto optimum can be supported as a competitive equilibrium for some initial set of endowments. The implication is that any desired Pareto optimal outcome can be supported; Pareto efficiency can be achieved with any redistribution of initial wealth. However, attempts to correct the distribution may introduce distortions, and so full optimality may not be attainable with redistribution.

Perfect competition will not lead to economic efficiency or Pareto optimality (i.e., optimum allocation of resources) if the given distribution of income is not optimal from the viewpoint of social welfare. The distribution of income is an important factor determining social welfare is now widely recognized y the economist. Pareto optimality will not be attained if the available resources are not fully employed or utilized. Therefore, a free enterprise economy characterised by perfect competition ensures efficient allocation of resources or maximum social welfare cannot be accepted without some conditions. And these conditions are

i. The second order conditions are to be satisfied.

ii. The externalities in production and consumption are absent.

iii. Prevailing distribution of income is optimal from the social point of view

iv. Available resources are fully employed.

In the present- day capitalist economies, it is monopolies, oligopolies and monopolistic competition which largely prevail and these market forms serve as a great obstacle for the achievement of Pareto –optimality or optimum allocation of resources.

**PUBLIC GOODS AND THE NEED FOR GOVERNMENT:**

The most of the modern economies are mixed economies with a large proportion of their GNP originating from public sector. Large percentage of the GDP is collected in the form of taxes to finance government activities. Much empirical evidence proved that over the period of time, the share of government in the GNP has steadily been increasing. This is due to because the modern governments have increased the provision of public goods- in terms of both qualitatively and quantitatively. Public goods are those goods and services provided by the government because a market failure has occurred and the market has not provided them. Sometimes it is in our benefit to not allow for a market provision. In the case of police, national defense and public education it can be argued that private provision of these services would be less desirable for a variety of reasons. Public goods are economic products that are consumed collectively, like highways, sanitation, schools, national defense, police and fire protection. All members of society should theoretically benefit from the provision of public goods.

It is widely agreed that one of the core functions of government is to supply public goods that markets either fail to provide or cannot provide efficiently. It has been widely accepted, in principle, the function of the government is to ensure that society’s well-being is maximized. In general, it is assumed that social welfare depends on the wellbeing of all members of the relevant society, and that the individual is broadly speaking the best judge of his well-being. Although increases in social welfare may occur in many different ways, it is presumed that if, as a result of a decision, at least one individual is made better-off and no one else is worse off, social welfare is increased. Moreover, in a liberal democratic philosophy it is the basic tenet that government intervention should occur only when it can be demonstrated that social welfare will thereby be improved.

**Objectives of Government Intervention:**

* To secure an efficient allocation of resources
* To ensure an equitable distribution of income or economic power
* To ensure and maintain the stability of the economic system
* To secure the satisfactory rates of economic growth

Private enterprise, operating in a market economy will meet most desires of the consumers in an advanced economy. But there are several situations in which market economy cannot function properly. These situations have certain economic characteristics like externalities, public goods, uncertainty, unfair distribution and lop-sided development that cause market mechanism to fail.

The goods which are collective in nature cannot be provided through market. They have two related qualities. These inevitably have to be supplied to a group of people rather than on individual basis. Secondly, these cannot be with-held from individuals who refuse to pay for these goods. Prof. Musgrave gave the concept of ‘Merit-wants’. According to him, “Public services aimed at the satisfaction of Merit-wants include such items as publically furnished school luncheons, subsidized low-cost housing and free education”.

The provision of public utilities like public health, transport and communication, power and infrastructural development etc, is also an area of priority. Due to externalities of these goods, the state must make a provision for their availability. The market may fail to provide these goods or there may be under produced in the market mechanism. If it is asked to do so, two extreme economic tendencies, viz., excessive competition or monopoly would develop. Both these tendencies are not conductive to the objective of social welfare. This situation also requires state intervention.

**Public Goods and Private Goods:**

In economics, goods are categorized into many different ways based on excludability and rivalness. Excludability is determined depending on the fact that whether an individual can be prevented from consuming them. Whereas, rivalness of a particular good is determined depending on whether individuals can consume these goods without affecting their availability for the other individuals.

Public good is a term in economics which refers to the good (commodity) that is available for use for everybody and one person’s usage of it does not diminish or exhaust its availability to others. It is considered non-excludable and non-rivalries. Public goods are provided as a whole to the society by the government and the consumption of these goods by an individual doesn’t reduce its availability or doesn’t exclude others from consuming it.

**Public Good and Free Rider Problem:**

The non-excludable property of the public goods gives rise to the free-rider problem as these goods can be bought by the people without paying for them. The free-rider problem is regarded as the burden on a shared resource. This situation arises when a person is using or overusing these goods without paying his/her fair share for it. The free-rider problem can occur in any community, large or small.

**Private Good:**

Any product which must be purchased for consumption, and which prevents another individual from consuming it if consumed by one individual is known as a private good. Therefore, a good is considered to be a private good if there is a competition between individuals to obtain the good and if consuming the good prevents someone else from consuming it.

Private goods have a lesser chance to experience the free-rider problem than the public goods as private goods are not readily available for free and a company produces private goods with a goal of making profits.

**Features of Public Goods:**

**1. Non-excludable**: Once the goods are provide, it is not possible to exclude people from using them even if they have not paid. This allows ‘free-riders’ to consume the goods without paying.

**2. Non-rival:** This means that consumption of the goods by one person does not diminish the amount available for the next person.

**Differences between Public Goods and Private Goods**

Public goods are different from private goods on three counts.

First, private goods permit exclusion principles which render them marketable. For example, A’s consumption of a private good (say, mango) is made contingent on his paying the price, while B who does not pay is excluded. But exclusion is not possible for public good. If public goods are produced, no one can be denied their benefits.

Second, for private good, benefits flow to a particular consumer implying thereby that benefits are internalized and consumption is rival. Therefore, exclusion may be applied without efficiency loss. But public good does not reduce B’s consumption. That is, the benefits of these goods accrue collectively to the society. Therefore, free market cannot efficiently allocate them. If these goods have to be produced, they must be produced by the government.

Third, the marginal cost of pricing a private good to an extra consumer is positive, whereas, in the case of public good, it is zero.

The public goods and private goods vary from each other on the basis of excludability and rivalries. The major differences between Public Goods and Private Goods are mentioned as below:

|  |  |
| --- | --- |
| **Public Goods** | **Private Goods** |
| It is non-rivalry as the consumption of one unit of these goods by one person does not decrease the available units for consumption by another person. | It is rivalrous as the consumption of one unit of private goods by one person does decrease the available units for consumption by another person. |
| It is non-excludable. A good is said to be non-excludable if it is impossible or extremely costly, to prevent someone from benefiting from that particular good who has not paid for it. | It is an excludable good as it prevents a person from enjoying the benefits of the good if they have not paid their share on that good. |
| They are non-rival in nature. Consumption by one individual does not affect consumption of another individual. Example: National Defence or Public Highway- if I am driving a car on the highway that does not stop any other individual from driving his/her car on the same highway. | They are Rival in nature. Rivalry means if one person consumes a good, then it will not be available for the consumption of another individual. Example- Any private good like a car, a pen, a mobile handset etc. if I own a car, then that particular car is not available to any other person. |
| They are non-excludable in nature. It means exclusion is not possible. If a public park is constructed, then no person can be excluded from using it, whether he pay tax/price or not. | They are excludable in nature. Excludability means that exclusion is possible. If someone does not buy a metro ticket, then he/she can be excluded from riding on the metro train. |
| The market for public goods does not exist. Hence price discovery is not possible. With no price available private sector will never supply such goods. Thus, Government must provide such goods. | The market for private goods exists. The existence of market helps in their price discovery, and hence prices for private goods exist which makes exclusion possible. |
| Property Rights are not determined. No person owns the Highway or a public park. They are common goods to be shared by all. No single person can claim that it belongs to them. | Property Rights of private goods are well determined. If I own a house, then I have exclusive property rights over its usage. The house is in my name; it belongs to me. |
| Free ridership is possible. Example- Government comes up with a provision that all houses must contribute Re 100 towards spreading of medicine for Dengue prevention. Despite this, some houses refuse to pay. The government simply does not let its prevention program fail because some houses are not paying. Since the issue involves public health threat, the government decides to provide it anyway. Thus, the houses that had not paid Re 100 will also enjoy the benefit of dengue prevention program. | Free Ridership is not possible. Free ridership is a situation when someone who has not paid for it started using it. |

**ALLOCATION OF PUBLIC AND PRIVATE GOODS:**

A government's decision on the allocation of resources between the private and public sectors of the economy and the pattern of distribution within them will be influenced by political, social and economic considerations. A government can leave the allocation to the market forces or, if this is considered to be undesirable - as for example at a time of war - it can allocate resources directly by such means as rationing, priority schemes and the provision of funds to specific users. The optimum allocation of resources will maximize the economic welfare of the people of a country and, as a goal of government’s policy, this will require:

(a) The measurement of costs and benefits that result from the use of resources and

(b) The establishment of principles of welfare, although no one single principle is generally accepted.

**Pareto Optimality**

In modern welfare analysis we still use a concept developed by Professor Vilfredo Pareto (1848-1923) and called 'the Pareto improvement'. It applies to a change in economic organization that results in everyone becoming better off. Pareto optimality is reached when the allocation of resources is at an optimum level, such that no further increase in the economic welfare of one person is possible without a decrease in that of another. The problem of how to quantify and compare welfare, however, now has to be tackled.

**Optimum and Efficient Allocation of Public Goods:**

There are three approaches to public goods allocation. The approaches are:

1. The Marginal Utility Approach of Public Goods Allocation

 2. Voluntary Exchange Approach

 3. Samuelson’s Approach to Public Goods Allocation.

**1. The Marginal Utility Approach of Public Goods Allocation:**

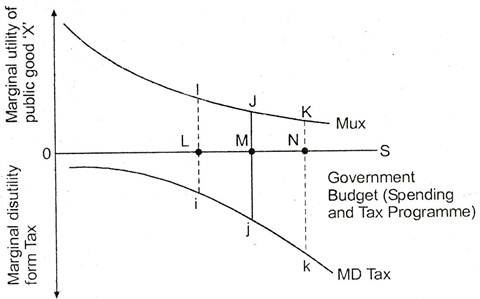
Professor A. C Pigou has made a heroic attempt to reconcile the benefit and ability to pay approaches. Pigou while developing the marginal utility theory of public goods allocation provided an analy­sis which comprehensively included both the tax and expenditure sides of public fiscal operation.

The benefits accruing to an individual are in the form of his consumption of public goods. The costs im­posed are in the form of income which taxes take away. Pigou ex­pressed these relationships in terms of the marginal utility and mar­ginal disutility created by devoting additional amounts of income to certain goods. In his analysis Pigou used the principle of marginalize.

That is the marginal sacrifice from the tax side and marginal benefit from the expenditure side, Professor A. C. Pigou relates the mar­ginal utility derived by individuals in a society from the consumption of public goods to the marginal disutility suffered by these individu­als in the payment of taxes to the public sector for the financing of the good.

If the marginal utility for the production of each good is equal to the marginal disutility caused by paying for it, either in the market place or via taxes, then optimum allocation of resources has been achieved. This optimum allocation refers to the choice between different public goods as well as between good in the public and private sectors.

**Public Goods Allocation: The Marginal Utility Approach**:

 Production of public good ‘X’ has been carried to point ‘M’ where the marginal utility derived from ‘X’ is just equal to the marginal disutility imposed by the taxes necessary to pay for its production. As long as there is positive net benefit from devoting more and more re­sources to the production of good ‘X’, expenditure and taxes should be increased. Therefore optimal inter sector resource allocation and optimal supply of both public and private goods occur at the point where marginal utility of public food X(MUx) is equal to marginal disutility of tax payment (MD Tax).

Moreover inter-sector optimality in resource allocation under this approach requires that marginal utility of the various economic goods allocated by each sector be equal within that sector. In the diagram marginal utility of public good ‘X’ and marginal disutility of tax payment are measured on the vertical axis.

Government budgetary operation including both tax and ex­penditure programme is measured on the horizontal axis. Point M represent optimal supply of public good ‘X’, Since at output OM of public goods, the marginal utility of public good ‘X’ is equal to the marginal disutility of tax payments. Therefore an expansion of public sector allocation towards point ‘M’ is desirable.

Point ‘L’ represent under allocation of public good and over allocation of private good whereas point ‘N’ represent over allocation of public goods and under allocation of private goods. Therefore at point ‘M’, the economy can realize optimal intersectional allocation of public and private goods.

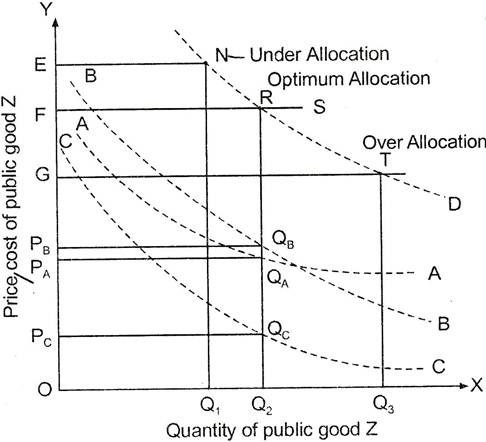
**2. Voluntary Exchange Approach:**

The voluntary exchange theory of public goods allocation derives itself from the benefit received principle governing the distribution of tax burden. This approach suggests that resources should be allo­cated to the public sector in a manner analogous to their allocation in the market with its price system.

An individual should buy public goods through taxes just as he elects to purchase private goods through market price. An individual becomes a “tax payer-buyer” who pays taxes for public gods in accordance with the benefits received from them.

The individual would equate the marginal ratios of tax prices to public goods benefits within the public sector. Likewise he will equate the cost-benefit rates on an inter-sector basis, between public goods and private goods.

The Lindahl Johanson and Bowen model of voluntary exchange theory of public goods allocation is demonstrated with the help of following figure.



The quantities of public good ‘Z’ demanded and supplied are measured on the horizontal axis and the demand price and supply costs of public good ‘Z’ are measured along the vertical axis.

For the purpose of simplicity three assumptions are made:

(a) The produc­tion or supply cost of public good is constant,

(b) The society con­sists of only three consumers or taxpayers A, B, and C. and

(c) There is only one type of pure public good Z’ which is demanded by all these consumers.

In the figure curves AA, BB and CC represent the demand curves of consumers A, B and C respectively for the public good ‘Z’. The curve DD is the total demand curve of all the three tax-payer-buyers or consumer, tax-payers. The summation individual demand curve is vertical since each consumer consumes the same amount of the public good.

From the figure we can realize that ‘R’ is the optimal point where the aggregate supply curve FS and aggregate demand curve DD intersect with each other and each consumer consumes QQ2 quan­tity of public good. Any other point except R is suboptimal. For example point N shows under allocation and point T shows over allocation, both being sub-optimal position.

The figure further shows that at quantity Q1 at point N on the aggregate demand curve, the demand price per unit exceeds the supply cost per unit by amount EF. This represents sub-optimal allocation i.e. an indication of under supply of public good. Whereas at quantity Q3, at point T on the aggregate demand curve, the supply cost per unit exceeds the demand price by an amount FG.

This represents suboptimal allocation, i.e. an indication of oversupply of the public good. Therefore output should be reduced towards the optimal quantity Q2. At the optimal output Q2, consumer A will pay OPA, B will pay OPB and consumer C will pay OPC per unit price. It should be noted that though each consumers consumes the same quantity, they do not pay the same price.

The combined payment OF of the three tax payer consumes is equal to the cost per unit, that is also OF, as measured along the vertical axis. This is the sum and substance of the voluntary exchange theory as illustrated by Lindahl, Johansen and Bowen.

The voluntary exchange model is a refinement over the earlier approaches to optimal allocation of public goods. This approach pro­vides an exposure to the nature of public goods and the difficulty experienced in allocating them in a market process owing to the collective and joint consumption characteristics of the public good.

**3. Samuelson’s Approach to Public Goods Allocation:**

Prof. Paul. A, Samuelson’s model of public goods allocation is con­sidered as the most efficient theory of public goods allocation. The Samuelson model clearly shows the fundamental differences that ex­ist between the allocation of public goods and private goods, based upon the application of micro economic principles. Therefore this theory is viewed as the extreme opposite of the private goods situa­tion represented by Walrasian general equilibrium case of perfect competition.

Samuelson presumes that an individual may not voluntarily re­veal his preferences for public goods. Therefore the market principle cannot be applied to the provision of public goods. The justification for government provision of public goods in a democratic society is the desire of the members of the society for such goods and activi­ties.

He therefore assumes that there exist omniscient planners to whom all the necessary data (regarding factor supplies, production functions, preference pattern of both private and public goods) are known.

In other words the omniscient planner knows each individu­als preferences for private goods as well as for public goods. There­fore the concept of Pareto optimality was applied by Samuelsson in the case of provision of social goods by the use of what he terms pseudo-demand curves and ‘pseudo prices’. Samuelson model also accepts interpersonal comparison of utility based on distributional value judgment.

These ethical judgments are then applied to an economic effi­ciency norm (i.e. the Pareto optimum norm) in the form of a social welfare function. His model can again be interpreted in terms of refection of interpersonal comparisons.

In the absence of interper­sonal comparisons, the social welfare of the community is simply a heterogeneous collection of individual welfares. This analysis takes into account the condition of Pareto optimality whereby social wel­fare can be increased only if one person’s welfare can be increased through an allocative readjustment without making another person worse or loosing welfare.

**MARKET FAILURE AND POTENTIAL ROLES FOR GOVERNMENT**

Market failure is the economic situation defined by an inefficient distribution of goods and services in the free market. In another way market failure happens when the price mechanism fails to allocate scarce resources efficiently or when the operation of market forces lead to a net social welfare loss. According to Browning and Jackson, market failure refers to those situations in which the conditions necessary to achieve the market efficient solution fail to exist or are violated in one way or another. Market failure is an extremely important feature of real life markets. The market system of an economy is unlikely to operate efficiently.

**Factors Responsible for Market Failure:**

* The existence of public goods
* External economies and diseconomies in production and consumption
* Imperfect competition
* Incomplete information (Asymmetric Information)
* Uncertainty

In most of these cases the origin of the market failure is to be found in the notion of transactions cost, exchange transactions, including market exchanges, are not costless to perform. Transactions costs include decision costs, information costs, bargaining costs and legal costs in drawing up contracts.

Given the presence of market failure, one possible role of government would be to intervene in the allocation function of the market and thus correct the market failure or introduce policies that would compensate its effect.

**CONDITIONS FOR EFFICIENCY IN A MARKET ECONOMY:**

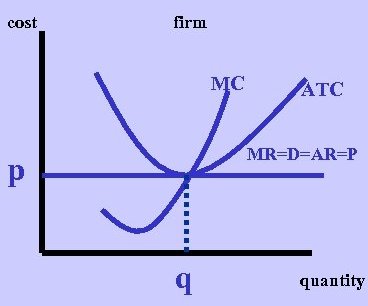
**1. Perfect Competition Must Be Hold:**

If market prices are to reflect both consumers preferences and producers’ cost, there must be:

(a) A perfect market where price differences are quickly eliminated and participants chose on the basis of price.

(b) Perfect knowledge, so that consumers and producers have adequate market and technical information upon which to make their decisions. If conditions (a) and (b) apply, then there will be common prices throughout the market for each product or factor of production.

(c) P=MR and firm produces that output where MR=MC



Hence, MR=P represent economic efficiency if MR=P, since production must proceed to the point where the satisfaction which the consumer derives from an additional unit of the good equals the cost to the society of producing that unit, i.e., P=MC. But price will only equal to marginal revenue under conditions of perfect competition. On the contrary, where there is imperfect competition, marginal revenue is less than price.

(d) All necessary conditions for perfect competition should exist everywhere in the economy simultaneously.

**2. No External Benefits or Costs (Externalities):**

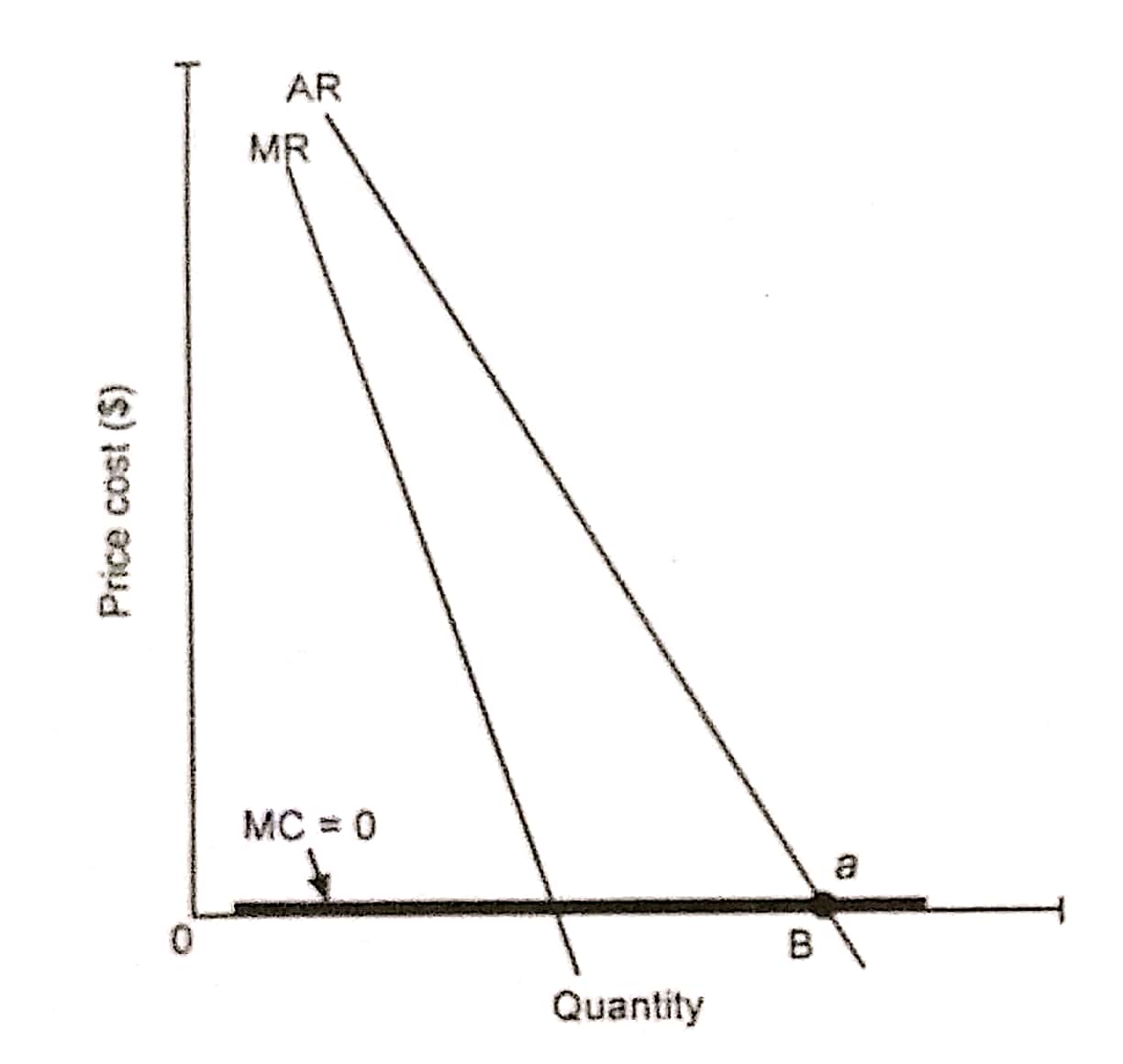
Generally, private consumers and producers seek to maximise their own benefits and profits. However, this assumes that their decisions impose no indirect benefits or costs on others.

**3. All Economic Goods Can Be Priced In The Market:**

The pure price system implicitly assumes that all economic goods are capable of being priced in the market, but this is possible only when the enjoyment of a good or service can be provided to those people who are willing to pay for it. With some goods or services, such as defence, street lighting and common land, it is impossible to exclude non-payers since anybody can be a “free rider”. Such goods therefore have to be provided collectively and financed not by charging individuals a price as they use them by subscription, by advertising and sponsorship or more usually through taxation.

**4. Zero marginal cost:**

An extreme case exists for those economic goods whose short-run marginal cost is zero.



In the above diagram, the MC curve coincides with the horizontal axis. At the optimum social output OB, which is determined by the intersection of MC and AR at point a, the allocation efficiency, would require that price of the good be zero since MC is zero. The extreme variation of the decreasing –cost phenomenon would require that the good be provided free of charge, since it can be consumed by additional individuals without an increase in production costs.

Illustration: The supply of national defence protection involves zero MC for protecting an additional citizen at a given level of defence output. This is an extreme case of pure public good.

**NEED OF GOVERNMENT INTERVENTION:**

At one extreme, free-market economists/libertarians, argue that government intervention should be limited to all but the most basic services, such as the protection of private property and the maintenance of law and order.

At the other extreme, Marxist economists argue that the government should intervene in all areas of the economy to ensure the most efficient and equitable distribution of resources.

In between, most economists believe it is a question of balance, with the government intervening in areas where the market fails to provide a desirable outcome. Main areas of government intervention include:

* Provide public goods (e.g. national defense) from general taxation
* Provide basic health care and education standards.
* Environmental regulation and protection.
* Limit the power of monopolies.
* Regulation on worker rights.

The government has to take an active part in improving the efficient working of the market economy and making normative judgments, ensuring more equitable distribution of income and wealth. The policy making authority may carry out redistribution by deliberate policy measures.

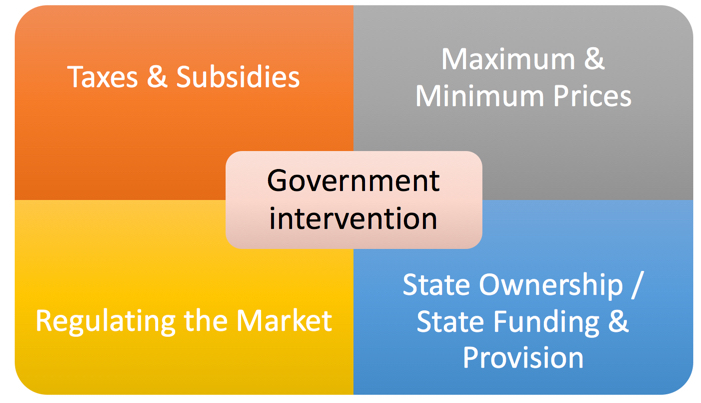
**Arguments for Government Intervention**

* The government tries to combat market inequities through regulation, taxation, and subsidies.
* Governments may also intervene in markets to promote general economic fairness.
* Maximizing social welfare is one of the most common and best understood reasons for government intervention. Examples of this include breaking up monopolies and regulating negative externalities like pollution.
* Governments may sometimes intervene in markets to promote other goals, such as national unity and advancement.
* Greater equality – redistribute income and wealth to improve equality of opportunity and equality of outcome.
* [Overcome market failure](https://www.economicshelp.org/microessays/market-failure/) – Markets fail to take into account externalities and are likely to under-produce public/merit goods.
* Macroeconomic intervention. – Intervention to overcome prolonged recessions and reduce unemployment.
* Disaster relief – only government can solve major health crisis such as pandemics.

**Arguments against Government Intervention**

* Governments liable to make the wrong decisions – influenced by political pressure groups, they spend on inefficient projects which lead to an inefficient outcome.
* Personal freedom. Government intervention is taking away individuals decision on how to spend and act. Economic intervention takes some personal freedom away.
* The market is most efficient at deciding how and when to produce.

**MODES OF STATE INTERVENTION:**

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Source:tutor2u.net

The state intervention is necessary in the modern economic system. Modern governments are empowered in several ways to influence the economy directly and indirectly. The government may participate directly in economic activities by undertaking the role of a producer, banker transporter and indulging in trading activity. It may influence the production and consumption of commodities through regulatory measures. For instance, it can discourage the consumption of liquor, tobacco or other intoxicants through the policy of prohibition. Similarly, it can interfere in the market economy through minimum wage legislation, mine safety rules, child and women labour laws, etc. The government can make laws with respect foreign exchanges. By overall, it can regulate the all corner of the economy. The citizens need to follow the course of action made by the authority.

**Direct Intervention:**

In certain areas which call for immediate and definite action, regulatory policies of the government prove to be more effective as compared to monetary and fiscal policy. Direct controls become immediately effective whereas monetary and fiscal policy take some time to become effective. Thus, direct controls are preferred during the emergencies like a war or other natural calamities. However, such controls interfere ruthlessly with the preferences of the individuals and require administrative resources for their implementation.

**Indirect Intervention (through Fiscal and Monetary Measures):**

The government may influence the level and pattern of production and consumption indirectly through the monetary and fiscal measures. Indirect controls also distort the preferences of the consumers, but in a soft way through the price mechanism. These measures also need lesser administrative resources for their operation. The volume of money supply and the structure of the interest rate can be designed by monetary policy. On the other hand, the fiscal tools control the flow of income between public and private sectors and relative prices of goods and services.

The subsidies aimed to increase the output of goods and services which otherwise would not be produced. On the contrary, taxes are levied to discourage the overproduction of goods and services. Similarly, progressive taxation based on the principle of ability- to- pay helps in reduction or economic inequalities.

On the expenditure side, the government can achieve its distributive objective by transforming the resources to the needy people. Notwithstanding, fiscal and monetary policies are complementary to other in promoting the objectives of economic development. The fiscal policy is generally considered more effective and has more firm and direct control on the economy. It directly encourages the level of savings and production patterns of the private sector. On the other hand, monetary measurers affect indirectly and their effectiveness depends on the nature of the economy. The fiscal measures are more effective in an underdeveloped economy and thereby achieve equitable growth by redistributing the resources.

**Advantages of Government Intervention:**

**a. Equality**: In a free market, there is likely to be significant inequality and poverty. This is not due to a meritocracy, but it could be due to unfair advantages of circumstances. Governments can intervene to provide a basic security net – unemployment benefit, minimum income for those who are sick and disabled. This increases net economic welfare and enables individuals to escape the worst poverty. This government intervention can also prevent social unrest from extremes of inequality.

**b. Public Goods**: [Public goods](https://www.economicshelp.org/micro-economic-essays/marketfailure/public-goods/) tend not to be provided in a free market because there is no financial incentive for firms to provide goods that people can enjoy for free. Governments can provide national defence, law and order and pay for it out of general taxation. Looking after the environment is also a public good, there are an increasing number of areas, where a government is needed to deal with issues such as forest fires, rising sea levels and pressure on water supplies.

**c. Education**: Merit goods are under-consumed in free-market because people underestimate the personal benefits and/or ignore the external benefits. This leads to an under provision of health care and education. Government intervention to provide free education can lead to a significant improvement in the quality of life for people who are educated. There are also many positive externalities to the rest of society. A well-educated society can improve labour productivity and economic growth.

**d. Shift Consumer Behaviour**: The consumption of [demerit goods](https://www.economicshelp.org/micro-economic-essays/marketfailure/merit-demerit-goods/) like alcohol, tobacco and opiates can cause personal costs and significant social costs (e.g. crime). If the government identifies damaging goods, they can slowly change consumer behaviour – such as using higher tax, advertising campaigns and [behavioural economics](https://www.economicshelp.org/blog/glossary/behavioural-economics/), e.g. making cigarettes difficult to buy with unappealing packets. Long-term government campaigns to reduce smoking have good effective in reducing smoking rates – something that has helped to increase life-expectancy.

**e. Environment**: The environment is an area with a significant need of government intervention. The free market ignores external costs of business on the environment. It also fails to consider long-term considerations. For example, market forces may lead to the burning of fossil fuels, which cause increasing environmental problems around the world – which will get worse in the future. Given the potential costs to future generations, there needs to be government action to shift behaviour to renewable energy which doesn’t cause these environmental costs. Also, the environment involves many issues where private ownership does not apply. If pollution causes a worsening air quality, then this affects everyone on the planet, but market mechanisms do not provide an opportunity to deal with the issue.

**f. Monopoly Power:** In a free market, firms can gain monopoly power to charge high prices to consumers and monopsony power to pay lower wages to workers. This increases inequality and [deadweight welfare loss](https://www.economicshelp.org/blog/2478/economics/deadweight-welfare-loss-of-tax/). Government intervention to limit mergers and monopoly power can lead to increased economic welfare.

**g. Strategic Planning on Infrastructure**: Another limitation of the free market is to under invest in quasi-public goods like roads and railways. This can lead to transport bottlenecks. Governments can plan for future transport trends and invest in the roads and railways which are needed for the future.

**Disadvantages of Government Intervention:**

**a. Government Failure**: Government failure is a term to describe how government intervention can cause its own problems. For example, the government may take decisions for short-term political consideration which lead to an inefficient outcome. For example, government tariffs to protect domestic industry spark off a trade war, where the economy contracts.

**b. Lack of Incentives**: In the free market, individuals have a profit incentive to innovate and cut costs, but in the public sector, this incentive is not there. Therefore, it can lead to inefficient production. For example, state-owned industries have frequently been inefficient, overstaffed and produce goods not demanded by consumers.

**c. Political Pressure Groups**: Milton Friedman once quipped ‘There is nothing as permanent as a temporary government bailout.’ He was referring to farming subsidies. Introduced in the 1930s during the Great Depression to alleviate a farming recession. After the Second World War, no government dared to remove subsidies because farmers were a powerful pressure group who wanted to keep the subsidies.

**d. Less Choice**: Often government intervention in the economy (e.g. Nationalisation of industries) has been associated with less choice. Government produced services have a monopoly. Command economies, often had very little choice as government decided what to produce. Choice is an important element of economic freedom and being able to maximise individual welfare.

**e. Impact of Personal Freedom:**  An increasing aspect of government intervention is through efforts to shift consumer behaviour – e.g. reduce congestion, improve health through reducing smoking rates and a healthier lifestyle. This includes taxes, behavioural influences and regulations. Sometimes people can feel this is overbearing on their individual choice.

**Module -2**

**EXTERNALITIES**

**Contents:**

* Economics of Externalities: Categories and Examples
* Externalities and the Absence of Markets
* Public Goods as a Special Case of Externalities
* Negative Externalities: Analysis of Marginal Damages - Extent of the Damages
* Pollution Abatement.
* Positive Externalities: Analysis of Marginal External Benefits
* Remedies for Externalities: A Private Solution: The Coase Theorem - Emissions Permit Trading
* A Public Solution: Regulations and Controls
* Pigouvian Taxes and Subsidies

**Economics of Externalities**

Externalities occur in an economy when the production and consumption of a specific good or service impacts a third party that is not directly related to the production or consumption of that good or service.

An externality is a cost and benefit of an economic activity experienced by an unrelated third party. The external cost or benefit is not reflected in the final cost or benefit of a good or service. Therefore, economists generally view externalities as a serious problem that makes market inefficient, leading to market failures. Any economic activity cost or benefits the person, who is not involved in that economic activity is economics of externalities.

The main cause of externality is poorly defined property rights. The ambiguous ownership of certain things may create a situation when some market agents start to consume or produce more while the part of the cost or benefit is covered or received by an unrelated party.

**Categories of Externalities**

1. **Negative Externalities**

a. Negative consumption externalities.

b. Negative production externalities.

2. **Positive Externalities**

a. Positive consumption externalities.

b. Positive production externalities.

**Negative Externalities**

A negative externality is a negative consequence of an economic activity experienced by an unrelated third party. The majority of externalities are negative. Some negative externalities, such as the different kinds of environmental pollution, are especially harmful due to their significant adverse effects. An economic activity affects negatively on the other person who doesn’t involved in that activity is negative externality. Economic activity may cost third party peace, health etc.

Negative externalities can be divided in to Negative consumption externalities and negative production externalities.

**Negative Consumption Externality**

The consumption of any good or service cost the third party, who doesn’t involve in that consumption is called negative consumption externality.

Examples:

**1. Smoking:** Smoking results in negative effects not only on the health of the smoker but it also affects the health of other people. The person who smokes is an active smoker who directly consumes cigarette but the people who surrounded by him were passive smokers they were not consuming cigarettes but they inhale smoke released by the cigarette, it effects the health of both active smoker and passive smokers. The consumption of one person effects negatively on the health of others who doesn’t involved in that consumption.

**2. Traffic Congestion:** The greater number of drivers uses road to travel increases traffic that creates problems like long driving hours, pollution etc. It affects the health of the surrounding population and especially pedestrians. The consumption of road by some people effects negatively on others.

**3. Noise pollution:** Noise pollution caused by loud music from a casino or night club may also affects third parties who are not part of revellers dancing to the music. Loud music may be mentally and psychologically disruptive, especially to children who are yet to adapt to the surrounding environment. On the part of adults, noise pollution may cause sleep deprivation and affects their productivity at their workstations.

**Some Negative Consumption Externalities**



**Negative Production Externalities:**

The production of any good effects negatively on the other who doesn’t involved in that production activity is called negative production externality.

**Examples:**

**1. Air Pollution:** Air pollution may be caused by factories, which release harmful gases to the atmosphere. Some of the gases include carbon monoxide and carbon dioxide. The destructive gases cause damage to crops, buildings and human health. High concentration of greenhouse gases in the atmosphere affect the global climate and brings about extreme heat waves, rising sea levels, intense hurricanes, graded air quality, and droughts. The release of toxic gases in to the atmosphere adversely affects vulnerable population such as children, the elderly and patients suffering from asthma and heart diseases.

**2. Water Pollution:** When industrial wastes are released to water sources, it makes the water harmful to humans, animals and plants that depend on it. Factory wastes often contain a mixture of various chemicals that cause death to aquatic animals living in the water and it denies fishermen a source of income. The contaminated water also affects plants that rely on clean water to survive. On the side of humans, drinking water that is contaminated with industrial wastes poses a threat to human life and can cause life- threatening diseases and even death.

**3. Non- Organic Vegetable Growing:** Farmers use fertilizers and pesticides which harm insects and also can get into the food chain, causing health problems in the future.

**4. Noise Pollution:** The households near big factories, Airports, markets etc may face noise pollution though they are not involved in the production activity in those factories, airports, markets etc. It negatively impact on the health of the people who are living in that locality and it reduces the efficiency of the people in their workplace.

**Some Negative Production Externalities**



**Positive Externalities:**

Any economic activity impacts positively on the other person who doesn’t involved in that economic activity is called positive externality. If the production or consumption of good or service benefits the third party who is not at all related to that production or consumption is positive externality.

**Positive Consumption Externality**

The consumption of goo or service benefits others or impacts positively on other is called positive consumption externality.

Examples:

**1. Education:** Imparting education is benefits to other persons also. For example, if you take a three-year training course in information technology, you gain personal skills, but also other people in the economy can benefit from your knowledge. The social benefit of consuming education is greater than your personal benefit.

**2. Purchase of Electronic Car/ Bicycle:** The purchase of electronic car or bicycle reduces the pollution it not only helps who is driving it but also helps others by decreasing pollution.

**3. Vaccination:** Vaccination benefits not only a person vaccinated but other people as well because the probability of being infected decreases.

**Positive Production Externality**

The production of goods or services benefits the third party who doesn’t involve in that production activity is called positive production externality.

**Examples:**

**1. Infrastructure Development:** Building a subway in a remote neighbourhood may benefit real estate agents who manage the properties in the area. Real estate prices would likely increase due to better accessibility, and the agents would be able to earn higher commissions.

**2.** **Research and Development:** A company that discovers a new technology as a result of research and development activities creates benefits that help the society as a whole.

**3. Apple Tree Farming:** A farmer grows apple trees. An external benefit is that he provides nectar for a nearby beekeeper who gains increased honey as a result of the farmers’ orchard.

**Externalities and the Absence of Market (Missing Market)**

A missing market is a type of market failure. A missing market means that there is some obstruction to an efficient free market which would enable a [Pareto efficient](https://www.economicshelp.org/blog/glossary/pareto-efficiency/) distribution of resources but for various reasons this market doesn’t exist. This obstruction could involve poor information, high transaction costs or the inability to price all social costs/benefits e.g. through externalities.

Pure public goods clearly provide a benefit to the consumer, but, for several reasons, are unlikely to exist in a market economy. Examples of pure public goods include national defence, the police service, and street lighting. Because markets for these goods are not likely to form they are called missing markets and are considered a special case where demand exists, but supply is absent.

## Pure Public Goods

The market mechanism is likely to fail to supply pure public goods because entrepreneurs are unlikely to enter the market, given the impossibility of charging consumers at the point of consumption. Public goods have the following characteristics:

### Non-Excludable

When a public good is supplied, it is impossible to exclude other individuals from deriving a benefit. For example, once street lighting is made available in an area, all passers-by can benefit, and no one can be denied access to it.

### Non-Diminishable

When a pure public good, such as street lighting, is consumed by one individual, the stock available for others does not diminish, as it would in the case of a private good. A pedestrian passing under a street light has no effect on the supply of lighting whatsoever. Non-diminishability is also known as the principle of non-rivalry. Because the stock of a public good does not diminish with use, consumers do not need to compete with each other to get access to them. For example, individuals do not need to queue to get access to street lighting.

### Non-Rejectable

Unlike a private good, consumers cannot reject a pure public good, and are forced to consume it. An individual cannot reject being defended by the armed forces of a country, nor can they reject the benefit of street lighting.

When combined, these three characteristics deter potential suppliers because it would be impossible to charge users at the point of use.

### Why Will Suppliers Not Be Able To Charge?

Suppliers cannot charge at the point of consumption or use because of the free-rider problem. No one would pay because the first person to pay for supply creates a free supply for everyone else! No one can be excluded from the market and prevented from consuming, and hence they are encouraged to become free-riders.

Because of this, suppliers are not able to generate any revenue, or make a profit, so a necessary condition for the formation of a market is absent, namely the absence of a profit incentive. With no incentive, entry into the market is deterred, resulting in a missing market.

## Remedies for Missing Market:

If we assume there is a limit to the formation and completion of markets, and a high probability that some markets might not exist at all, policy makers need to consider how demand can be satisfied. One of the roles of government is to allocate scarce resources to satisfy demand for public goods. There are several ways governments can do this, including the following.

1. A government can take complete control over the initial planning, funding and operation of public goods like defence, policing and street lighting. Government can impose general taxes to pay for these services, rather than try to charge consumers directly.
2. With transport services, government can fund the building of the infrastructure, and contract-out the running and maintenance of the service to private firms, as with bridges, tunnels, motorways, and airports.
3. Government is likely to fund the initial investment out of taxation, and it may be possible to charge consumers, if the free-rider problem can be solved. For example, tolls can be used to charge drivers wishing to use a motorway, and airports can charge landing fees to private airlines.

**PUBLIC GOODS AS A SPECIAL CASE OF EXTERNALITIES**

 Public good has two key characteristics: it is no excludable and non-rivalrous. These characteristics make it difficult for market producers to sell the good to individual consumers.

* No excludable means that it is costly or impossible for one user to exclude others from using a good.
* No rivalrous means that when one person uses a good, it does not prevent others from using it.

Public goods are non-excludable and non-rival. Individuals cannot be effectively 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.

Examples of public goods include fresh air, knowledge, lighthouses, national defence, flood control systems, and street lighting.

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.

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.

For example, a local public radio station relies on support from listeners to operate. The station holds pledge drives several times a year, asking listeners to make contributions or face possible reduction in programming. Yet only a small percentage of the audience makes contributions. Some audience members may even listen to the station for years without ever making a payment. Those listeners who do not make a contribution are “free-riders.” If the station relies solely on funds contributed by listeners, it would under-produce programming. It must obtain additional funding from other sources (such as the government) in order to continue to operate.

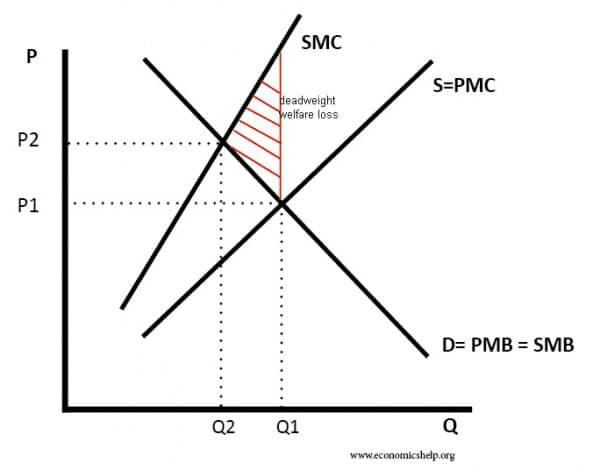
**NEGATIVE EXTERNALITY: ANALYSIS OF MARGINAL DAMAGES**

**Negative Production Externality**

When producing a good cause, a harmful effect to a third party. Therefore, the social cost is greater than the private cost.

#### Examples of Negative Production Externalities

* Burning coal for energy creates pollution.
* Producing conventional vegetables with pesticides causes carcinogens to get into the environment.



* Because of the external costs the social marginal cost is greater than the private marginal cost.
* In a free market, producers ignore the external costs to others. Therefore output will be at Q1 (where Demand = Supply).
* This is socially inefficient because at Q1 – SMC> SMB
* Social efficiency occurs at Q2 where Social marginal cost = Social marginal benefit

The red triangle is the area of deadweight welfare loss. It indicates the area of overconsumption (where SMC is greater than PMC)

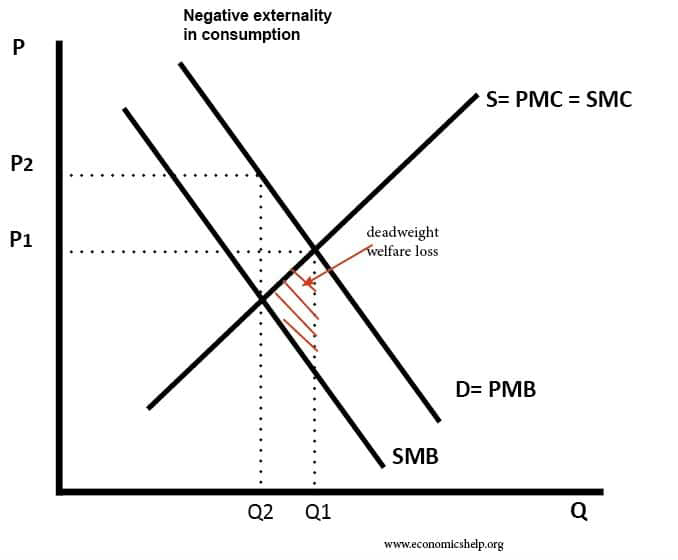
## Negative Externality of Consumption

This occurs when consuming a good causes a harmful effect to a third party. In this case, the social benefit is less than the private benefit.

#### Examples of Negative Externalities of Consumption

* Consuming alcohol leads to an increase in drunkenness, increased risk of car accidents and social disorder.
* Consuming loud music late at night keeps your neighbours awake.
* Consuming cigarettes causes passive smoking to others in the vicinity.

**Diagram of Negative Externality in Consumption**



* In a free market, we get Q1 output. But at this output, the social marginal cost is greater than the social marginal benefit.
* The red triangle is the area of dead-weight welfare loss.
* Social efficiency occurs at a lower output (Q2) – where social marginal benefit = social marginal cost.

**Implications of Negative Externalities**

If goods or services have negative externalities, then we will get market failure. This is because individuals fail to take into account the costs to other people.

To achieve a more socially efficient outcome, the government could try to tax the good with negative externalities. This means that consumers pay close to the full social cost.

**POLLUTION ABATEMENT**

Market and regulatory failures result in extensive levels of pollution, causing damage to human health, and natural and productive assets. The prevention and mitigation of these effects at local, regional and global levels call for the proper set of environmental policies and policy implementation instruments.

Pollution abatement refers to technology applied or measure taken to reduce pollution and/or its impacts on the environment. The most commonly used technologies are scrubbers, noise mufflers, filters, incinerators, waste—water treatment facilities and composting of wastes.

Pollution abatement refers to any measure taken to reduce, control or eliminate pollution from a given environment. Abatement measures can be technological, like catalytic converters on vehicles to reduce air pollution, or they may be regulatory, like laws limiting the amount of solid waste a sewage management facility can release into a waterway. Abatement measures may also be behavioural, like turning down a home thermostat a degree or two in winter to [reduce electricity consumption](https://sciencing.com/reduce-electricity-consumption-4452283.html) and greenhouse gas emissions.

Most pollution problems are the results of market failures. Economic agents make decisions about the level of their production and consumption based on market prices, considering the costs and benefits of their actions. Environment doesn’t have a market price, however, and private costs don’t include the external social cost of damage caused to other members of society by using and polluting the environment. Although optimally polluters should internalize all the costs of damage caused by pollution, without government intervention they have no incentive to do so, causing excessive pollution of all environmental media.

The inefficient management and operation of productive assets lead to wasteful use of resources and inadequate housekeeping, contributing to pollution.

**Abatement Strategies in Some Areas:**

**Air**

Smog, ground-level ozone pollution, acid rain and climate change influenced by greenhouse gas emissions are all products of fossil-fuel combustion, whether for industrial processes, electricity generation or gasoline-powered vehicles. Examples of contemporary abatement strategies include requiring smoke-stack scrubbers on coal-fired power plants to reduce emissions of sulphur and nitrogen dioxides and placing caps on carbon emissions to reduce greenhouse gases.

**Soil**

Land pollution can come from a variety of sources. Landfills, chemical and fuel refinery leaks or spills and industrial agricultural techniques that require heavy use of pesticides and chemical fertilizers all contribute to soil pollution. Abatement measures include eliminating lead from fuels to reduce lead pollution of the soil, requiring underground liners for landfills, voluntary recycling programs, regulating fuel and chemical production to minimize risks of spills or leaks and exploring alternative agricultural methods to reduce the need for pesticides and herbicides.

**Water**

Water pollution usually comes in one of two major forms, point source pollution and nonpoint source pollution. Point sources include specific release of pollutants into waterways, like industrial effluents or untreated sewage. Nonpoint sources are not locally specific and include pollution from storm water runoff in urban areas and pollutant leaching from contaminated soils. Abatement measures include requiring treatment of sewage waste water solids, installation of storm runoff retention systems (also called wet ponds) in areas with a high density of impervious surfaces and educating the public about the dangers of storm water pollutants to streams, rivers and aquifers.

**Energy Conservation**

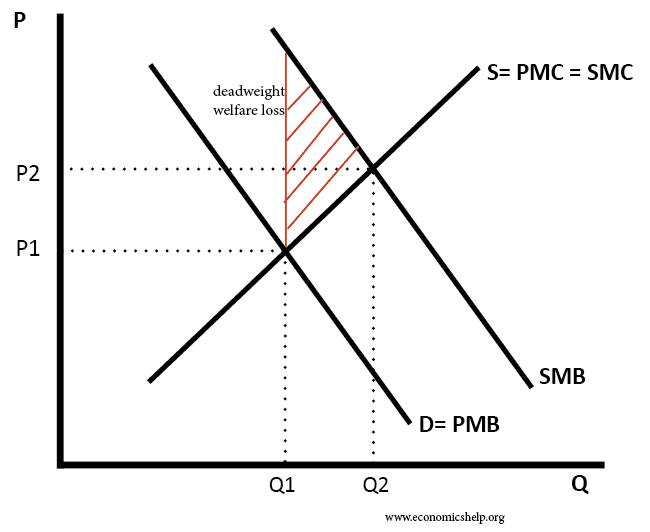
Another basic but important pollution abatement strategy includes what many calls reducing carbon footprint. More people using fewer resources and less energy reduces pollution impacts on a larger scale. Examples of conservation include: using cleaner-burning fuels and renewable sources of energy like solar or wind power, using public transportation or carpooling, recycling and reusing paper, plastics and metals, insulating your home to make it more energy efficient, installing energy efficient appliances, and buying locally produced goods to reduce the need for shipping of products over long distances.

**Positive Externalities: Analysis of Marginal External Benefits**

**Social Benefit**

* With positive externalities, the benefit to society is greater than personal benefit.
* Therefore with a positive externality the Social Benefit > Private Benefit
* Social Benefit = private benefit + external benefit.

**Diagram of Positive Externality (Consumption)**



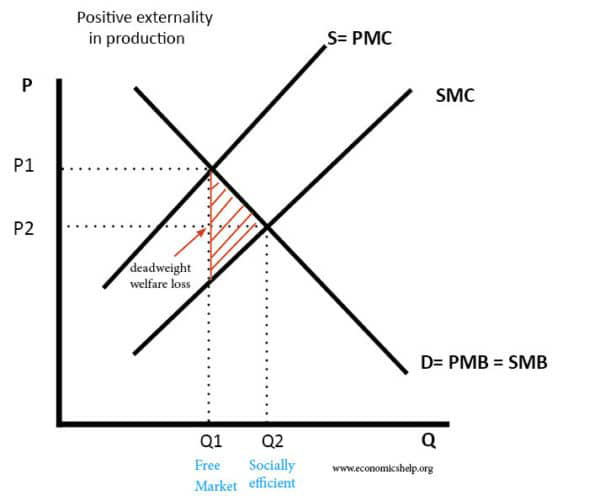
In this case, the social marginal benefit of consumption is greater than the private marginal benefit. For example, if you take a train, it reduces congestion for other travellers.

* In a free market, consumption will be at Q1 because demand = supply (private benefit = private cost)
* However, this is socially inefficient because at Q1, social marginal cost < social marginal benefit. Therefore, there is under-consumption of the positive externality.
* Social efficiency would occur at Q2 where social cost = social benefit
* For example, in a free market without government intervention, there would be an under-consumption of education and public transport.

**Positive Externality (Production)**

* This occurs when a third party benefits from the production of a good. For example, building a train station may provide shelter for the homeless when it is raining.
* If a company develops new technology, such as a database programme, this new technology can be implemented by other firms who will gain a similar boost to productivity.
* Tim Berners Lee who developed the World Wide Web, made it freely available, creating a very large positive externality.

**Diagram of Positive Externality in Production**



* Because there are positive externalities in production, the social marginal cost of production is less than the private marginal cost of production.
* In a free market, a firm will ignore benefits to third parties and will produce at Q1 (free market outcome)
* However, the socially efficient level will be at Q2 (where social marginal cost = social marginal benefit)

**More Examples of Positive Externalities**

* Getting a vaccination provides a benefit to other people in society because you do not spread infectious diseases.
* A decision to stop smoking causes benefits to other people in society who longer suffer passive smoking.
* Switching from conventional farming to organic farming helps the environment as there are fewer chemicals in the environment.
* Picking up litter makes the environment nicer for everyone.

**REMEDIES FOR EXTERNALITIES**

**A Private Solution: The Coase Theorem**

In the celebrated article published in 1960, R. H. Coase argued that the Pigouvian solution may not always be appropriate and may lead to results that are not optimal. He demonstrated that under certain situations, the problem of externalities can be tackled through the market mechanism, that is, without the intervention of the government. This is possible when property rights are appropriately assigned. For, if we vested with legal rights to a given property, economic agents can negotiate among themselves to work out arrangement whereby those who produce negative externalities offer to pay for them. The possibility of private sector finding solution to externalities in this way gave rise to what is known as Coase Theorem and has been subject to extensive discussion among economists.

The Coase Theorem postulates that exchange of legal entitlement, like those of resources, can help to achieve efficient allocation of resources in the economy. Legal entitlements usually embrace not merely the right to use one’s property one likes, but also the right to be free from nuisance, the right to compensation for accidents/danger caused by others, and the right to enforcement of contracts. Coase theorem says that whatever be the initial allocation of entitlement, efficiency need to suffer so long as (a) they can freely be exchanged, (b) there is no transaction costs and (c) the market is perfectly competitive. Under such conditions the parties involved can bargain and come to agreements whereby those responsible for causing the negative externalities compensate the victims.

In some cases, for example, a common resource like an oil pool for which none can be given a clearly demarcated or exclusive property right, costs arising from externality can be minimised through which what is called ‘Unitisation’, that is, parties joining together to divide the areas among themselves ‘in Units’ or imposing restrictions on themselves. The legal system itself can tackle externalities even when the property rights are not well-defined by enforcing the rights usually recognised under what is called ‘Common Law’. The compensation is ordered by the courts to be paid to the victims. The compensation paid to the Bhopal Gas Victims is an example of how legal system in India helped to protect the citizens against negative externalities as a matter of entitlement.

However, the Coase Theorem suffers from limitations as it is applicable only under the conditions mentioned above, viz., that there are no transaction costs involved in the process of bargaining among parties and the market is perfectly competitive because under a monopoly the output is unlikely to be optimum. With the bargaining between producers and the parties affected by externality, the output is likely to be even smaller as the marginal cost increases with the addition of cost of compensation or costs external to producers and the parties affected by externality, the output is likely to be even smaller as the marginal cost increases with the addition of cost of compensation or costs external to producers. Coase theorem also assumes that the number of parties involved is as small as otherwise the free rider problem appears and the problem remains insoluble when the benefit of corrective action pertains to a public good like clean air. Besides, for bargaining process to yield pereto-optimum results all the parties should have full access to the relevant information. Again, for the operation of the Coase Theorem the parties must be identifiable. This may not always be the case as happens when externality has an inter-temporal dimension. For example, when it affects the future, that is unborn generations. Due to all this reason, it may not be possible to have a market solution to externalities. Hence, the government intervention becomes necessary.

Government intervention for the correction of externalities may take several forms such as regulation and levies. Some solutions are market based like Pigouvian taxes and subsidies. ‘Market Permits’ can also be issued to allow those who create negative externalities. They can continue with their activities but by bearing an additional cost.

**Emissions Permit Trading**

An [Emissions trading](https://www.theguardian.com/environment/emissionstrading) is a market-based approach to controlling pollution. By creating tradable pollution permits it attempts to add the profit motive as an incentive for good performance, unlike traditional environmental regulation based solely on the threat of penalties.

An Emission standard is a legal limit on how much pollutant a firm can emit. If the firm exceeds the limit, it can face monetary and even criminal penalties.

The main form of emissions trading is known as "cap and trade": a cap on emissions is set and then permits are created up to the level of this cap. The companies or other entities covered by the scheme need to hold one permit for every tonne of pollution ([CO2e](https://www.theguardian.com/environment/2011/apr/27/co2e-global-warming-potential)) they emit. Allowing a trade in these permits puts a price on pollution – the cost of emitting one tonne of carbon dioxide is the cost of the permit – and creates flexibility as to how and where pollution is reduced.

The theory is that setting a limit on pollution and allowing the market to decide how to stay within that limit is ideally suited to reducing carbon emissions, which come from almost all forms of economic activity and mix into the atmosphere with global effect. The market should ensure that the emissions cuts happen at the lowest possible cost, and the cap can be lowered year by year in a managed way.

Supporters argue that this is preferable to other forms of pricing, such as carbon taxes, which do not guarantee any particular level of reduction. However, critics often emphasise the degree to which emissions trading has been marred by weak caps, free handouts of permits to the biggest polluters and the purchase of "offsets" – carbon credits bought from outside the cap-and-trade system from carbon reduction projects in the developing world.

Marketable emissions permits create a market for externalities. This market approach is appealing because it combines some of the advantageous features of a system of standards with the cost advantages of a fee system. The agency that administers the system determines the total number of permits and therefore the total amount of emissions, just as a system of standards would do. But the marketability of the permits allows pollution abatement to be achieved at minimum cost, just as a system of fees would do.

**A Public Solution: Regulation and controls**

The government can respond to externalities in two ways. The government can use command-and-control policies to regulate behaviour directly. Alternatively, it can implement market-based policies such as taxes and subsidies to incentivize private decision makers to change their own behaviour.

Command-and-control regulation can come in the form of government-imposed standards, targets, process requirements, or outright bans. Such measures make certain behaviours either required or forbidden with the goal of addressing the externality. For example, the government may make it illegal for a company to dump certain chemicals in a river. By doing so, the government hopes to protect the environment or other companies or individuals that use the river that would otherwise suffer a negative impact.

In practice, implementing regulation effectively is difficult. It requires the regulator to have in-depth knowledge of a certain industry or sphere of economic activity. If done incorrectly, regulation can introduce inefficiency. For example, if the government makes it illegal to dump in the river, the companies and their customers may suffer because the products must be produced using less efficient methods. On the other hand, if the government allows too much to be dumped in the river, they have failed to mitigate the negative externality.

If the government is unsure of how to effectively regulate the market, it should seek other methods of mitigating the externality. Advocates of market-based policies for reducing negative externalities point to the difficulty of creating and enforcing effective regulation for reasons why the government should create systems of incentives and disincentives instead of using the force of regulation.

**Taxes**

Taxes are a market-based policy option available to the government to address externalities. A corrective tax (also called a Pigovian tax) is applied to a market activity that is generating negative externalities (costs for a third party). The tax is set equal to the value of the negative externality and provides incentives for allocation of resources closer to the social optimum.

In the case of negative externalities, the social cost of an activity is greater than the private cost of the activity. In such a case, the market outcome is not efficient and may lead to overproduction of the good. Taxes make it more expensive for firms to produce the good or service generating the externality, thus providing an incentive to produce less of it.

Take environmental pollution as an example. The private cost of pollution to a polluter is less than its social cost. If the government levies a tax on pollution, it increases the polluter’s private cost. The polluter now has an incentive to generate less pollution.

The level of the corrective tax is intended to counterbalance the externality. In practice, however, it is extremely difficult for the government to determine the appropriate level for the tax. Moreover, in determining the tax level, the government might come under pressure from various interest groups that would benefit from a higher or lower taxation level. Nevertheless, by introducing corrective taxes in response to negative externalities the government can not only increase efficiency, but raise revenues as well.

**Quotas**

Tradable permits are a market-based approach allowing the government to limit negative externalities produced by a group of firms. To address the problem of negative externalities, governments may use a quota system to try and limit them. In a quota system, the negative externality is capped at a certain amount. In the example of pollution, the government may put a quota on the amount of pollution a factory can produce by issuing tradable permits. Tradable permits are one of the market-based approaches the government can use to address externalities. In the past tradable permits have been primarily used to control pollution.

When pursuing this approach, the government sets a limit or cap on the amount of a pollutant that may be emitted. It then allocates emissions permits up to the specified limit among firms. The permits represent the right to emit or discharge a specific volume of a specified pollutant. Firms are required to hold a number of permits equivalents to their emissions. Firms that need to increase their volume of emissions must buy permits from firms that require fewer of them. This transfer is referred to as a trade. In effect, the buyer is paying a charge for polluting, while the seller is being rewarded for having reduced emissions. The outcome achieved by the market for permits is more efficient, regardless of the initial allocation of permits.

The market for tradable permits creates incentives for firms to produce less pollution. Firms that have a high cost of reducing emissions are willing to pay for the permits, while those that can reduce emissions in the most cost-efficient manner will do so and sell their permits. Tradable permits thus achieve a desired level of the externality by allowing the market to determine which market actors can create the externality.

There are several active trading programs for air pollutants. For greenhouse gases the largest is the European Union Emission Trading Scheme. In the United States there is a national market for sulphur dioxide emissions to reduce acid rain. Markets for other pollutants tend to be smaller and more localized.

**PIGOUVIAN TAXES AND SUBSIDIES**

**Pigouvian Tax**

A Pigouvian tax is a government cost on any activity that creates socially harmful externalities. An externality is an activity that creates a negative effect on others in a society but not necessarily the person who does that activity. [Pollution](https://www.thebalance.com/pollution-facts-economic-effect-4161042) is an externality, for example. Drivers of non-compliant vehicles don't suffer immediately from their exhaust, but everyone behind them does. Their exhaust also increases pollution for everyone in the community. The government imposes Pigouvian taxes on non-compliant vehicles to impose a higher cost on the drivers to compensate for the suffering they cause. The revenue from the tax is often used to ameliorate the external cost.

British economist Arthur Pigou developed the concept of externalities. He argued that the government should intervene to correct them by taxing activities that harm the economy as a whole and subsidizing activities that help society as a whole.

**Examples of Pigouvian Tax**

### Gas Taxes

A gasoline tax is an example of a Pigouvian tax. It raises the driver's cost to cover the negative externalities created by driving automobiles.

### Noise Taxes

France levies a Pigouvian noise tax on airplanes at its nine busiest airports. It ranges from 2 euros to 35 euros depending on the airport and the weight of the aircraft. The government uses the revenue to soundproof houses that are exposed to noise levels beyond 70 decibels.

### Carbon Taxes

About 40 countries impose [carbon taxes](https://www.thebalance.com/carbon-tax-definition-how-it-works-4158043) on companies that burn coal, oil, or gas, which produce greenhouse gas emissions. These emissions cause climate change, which can bring about more natural disasters, raise sea levels, and increase droughts.

Although Pigouvian taxes may work in one sense, they can have some unanticipated or unintentional negative effects.

**Advantages**

* Discourages undesirable behaviours
* Encourages economic efficiency
* May generate additional government revenue

**Disadvantages**

* May further disadvantage people with lower income
* Can backfire and create the opposite of the desired effect
* Difficult to measure

**Pigouvian Subsidy**

A Pigouvian subsidy is a [subsidy](https://energyeducation.ca/encyclopedia/Subsidy) that is used to encourage behaviour that have positive effects on others who are not involved or society at large. Behaviours or actions that are a benefit to others who are not involved in the transaction are called [positive externalities](https://energyeducation.ca/encyclopedia/Positive_externality). This is closely related to the idea of a [Pigouvian tax](https://energyeducation.ca/encyclopedia/Pigouvian_tax). A positive externality is something that enhances society as a whole. It results from an economic transaction that has positive external effects on others not party to the transaction.

One example of a positive externality is the market for education. The more education a person receives, the greater the social benefit since more educated people tend to be more enterprising, meaning they bring greater economic value to their community.

Another example is behaviour that reduces [pollution](https://energyeducation.ca/encyclopedia/Pollution) that imposes a negative effect on society. Assume a government wants to reduce the dependence of their country on [fossil fuels](https://energyeducation.ca/encyclopedia/Fossil_fuel), the government might give a subsidy to homeowners who buy [solar panels](https://energyeducation.ca/encyclopedia/Solar_panel) for their house to reduce the amount of [electricity](https://energyeducation.ca/encyclopedia/Electricity) they draw from the [grid](https://energyeducation.ca/encyclopedia/Grid) that is powered by [coal](https://energyeducation.ca/encyclopedia/Coal).

**Module-3**

**SOCIAL CHOICE IN A DEMOCRATIC SOCIETY**

**Contents:**

* Collective Decision Making: Individual Preferences and Collective Decision Making
* Optimal and Sub-optimal Inter-Sectoral Allocation
* The Societal Production Possibility Curve
* Alternative Public Sector Allocation Instruments
* Problem of Revealing Preferences and their Aggregation
* Reconciliation of Conflicting Preferences
* Representative Democracy - Theory of Second Best.

**SOCIAL CHOICE IN A DEMOCRATIC SOCIETY**

**Individual Preferences and Collective Decision Making:**

The aim of collective decision making is to undertake the best (optimal) solution to a given problem by a group of experts in a given field. Many important decisions, in various contexts, are made by groups, such as committees, governing bodies, juries, business partners, teams, and families. Group decisions are typically preceded by deliberation among members, who enter the process with varying opinions and preferences. The expansion of democratic institutions and rapid progress in communication technology further highlight the prevalence of group decisions in politics and business, among other facets of society.

 Social choice theory itself grew out of the innovative attempts by Ken­ neth Arrow (1951) and Duncan Black (1948, 1958) to extend the range of economic theory in order to deal with collective decision-making over public goods. Later work, by William Baumol (1952), and James Buchanan and Gordon Tullock (1962), focussed on providing an economic interpretation of democratic institutions.

Public choice theory is a branch of economics that developed from the study of taxation and public spending. It emerged in the fifties and received widespread public attention in 1986, when James Buchanan, one of its two leading architects (the other was his colleague Gordon Tullock), was awarded the Nobel Prize in economics.  Public choice takes the same principles that economists use to analyze people's actions in the marketplace and applies them to people's actions in collective decision making.

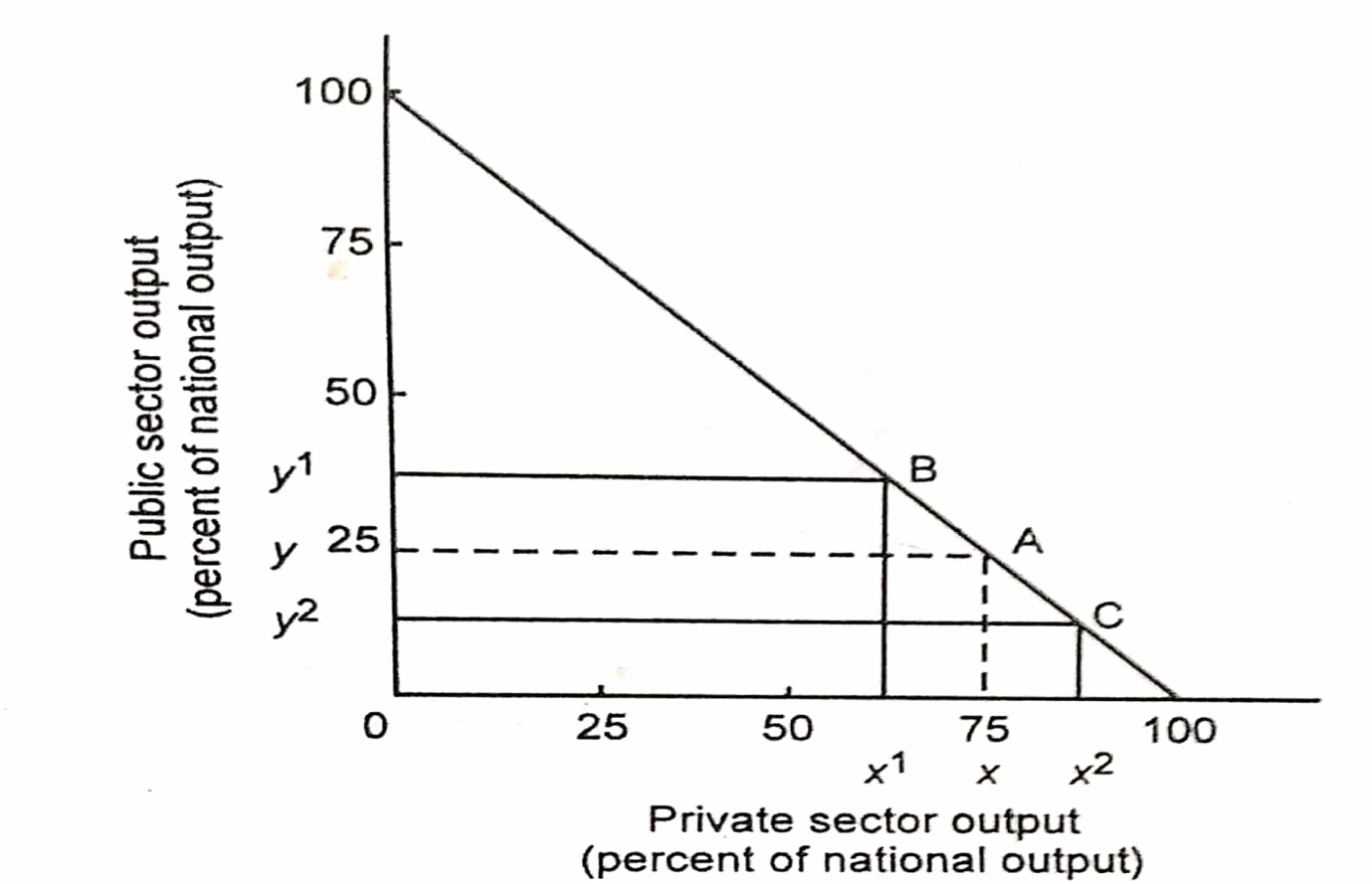
In the past many economists have argued that the way to rein in "market failures" such as monopolies is to introduce government action. But public choice economists point out that there also is such a thing as "government failure." That is, there are reasons why government intervention does not achieve the desired effect. Public choice economists have focused mostly on analyzing government failure; they also have suggested ways to correct problems.

Many public choice economists take no political or ideological position. Some build formal mathematical models of voting strategies and apply game theory to understand how political conflicts are resolved. Some of these economists have developed a separate and quite mathematical discipline known as "social choice." Social choice traces its roots to early work by Nobel Prize-winning economist Kenneth Arrow. Arrow's 1951 book, Social Choice and Individual Values, attempted to figure out through logic whether people who have different goals can use voting to make collective decisions that please everyone. He concluded that they cannot, and thus his argument is called the "impossibility theorem."

**OPTIMAL AND SUB-OPTIMAL INTER-SECTORAL ALLOCATION**

An economic system must determine the mix of resource allocation between the private and public sectors. At any one point of time there always exists an actual division of resources between the public and private sectors. On the other hand, there may also be conceptualised optimal division of resources known as social balance, given the preference patterns and effective demand of citizens. The points of actual and optimal allocation may or may not coincide. If they do not coincide, it can be said that inter-sector resource allocation is sub-optimal, or alternatively, the social imbalance or inter-sectoral misallocation exist. In case of a deviation between the two, the actual resource allocation will call for an upward or downward adjustment so as to coincide with the optimal division/allocation so that social balance is established.

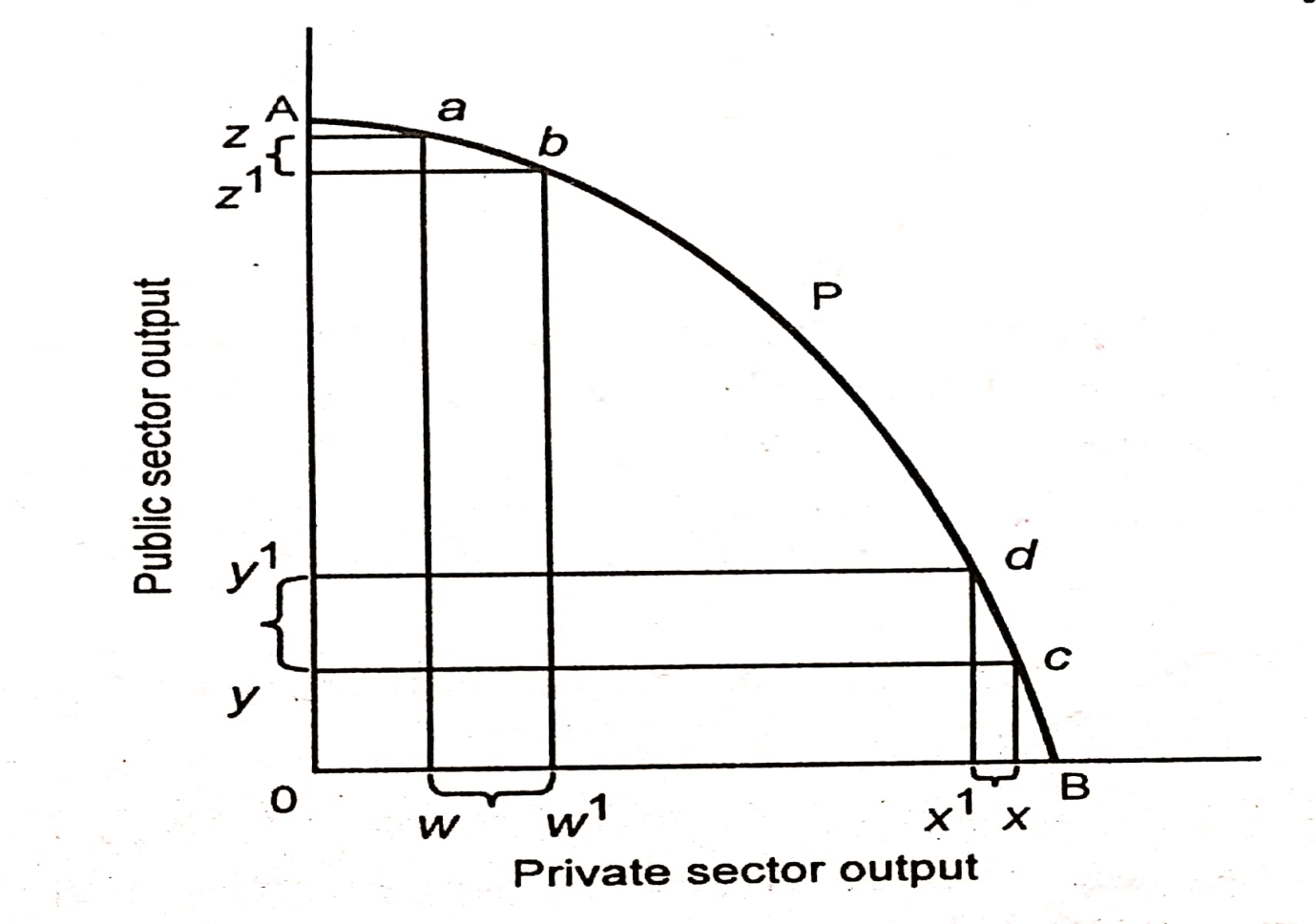
The relationship between optimal and sub-optimal inter-sector resource allocation is shown in the below figure. In this figure, private sector output as a percentage of total national output is measured on the horizontal axis, and the public sector output as a percentage of total national output is measured on the vertical axis.



It is assumed that point A represents an optimal division of national output the private and public sector, with the private sector controlling 75 percent of resource allocation and the public sector controlling 25 percent. In a conceptual sense, this social balance point would thus be assumed to reflect the time preferences of the people of the society for private and public goods as made effective by the distribution of income, wealth and political voting power among the people.

If point A represents optimal inter-sectoral allocation, and if the actual mix of resources between private and public goods in the society is also at point A, then optimal and actual points of inter-sectoral resource allocation coincides and social balance is present. Given the preference patterns of individuals of the society, no welfare improvement would result from reallocation between private and public output. If, however, point A represents optimal inter-sectoral allocation is at point B, or at point C, then sub-optimal allocation or social imbalance is present. In this case, reallocation between the two sectors is needed if society’s welfare is to be maximised. The imbalance gap between points A and B represents an under allocation of resources to the private sector and an over allocation of resources to the public sector by the proportion of xx1 and yy1 respectively. The imbalance gap between points A and C represents an over allocation of resources to the private sector and under allocation of resources to the public sector by the proportions of xx2 and yy2 respectively. It may be mentioned here that over a period of time, such imbalance may either reduce, and vanish, or may even widen or reverse. It is not only actual allocation which may change with passage of time, but even the social balance point may undergo a change due to change in the pattern of preferences of the members of society. The social balance concept can also be discussed with the help of indifference curves.

**The Societal Production Possibility Curve**



In the above figure private sector output id measured along the horizontal axis and the public sector output along the vertical axis. The output may be considered either in monetary value terms or in physical unit terms, though the former is more practical.

In the above figure AB is the production possibility curve (PPC) of the society, showing the marginal rate of transformation between private goods and public goods with a given productive resources. The higher the position of production possibility in the figure, the greater the production potential of the society due to the greater quantity and quality of its productive resources. At point A, all the resources would be allocated to the public sector, whereas, at point B all the society’s resources would be allocated to the private sector. The production possibility curve AB is concave to the origin which means that scare resources cannot be substituted with equal efficiency between the production of the public and private goods. Thus, in the figure a reallocation of the resources along the upper part of PPC as from a to b would add more to the private sector output (distance ww1) than is sacrificed in the public sector output (the distance zz1). This would be due to decreasing returns in the production of public goods. A movement along the lower portion of the PPC, as from c to d, however, could add more to the public sector output than is sacrificed in private sector output. This would be due to decreasing returns in the production of private goods. A comparison of the distance between yy1 and xx1, respectively indicates this phenomenon.

The unequal trade-off between the output of the public goods and private goods can be explained by the following reasons:

* Some economic goods, by their nature, are produced more efficiently, with less real input costs per unit of output, by one sector than by the other.
* But equally important, increasing costs tend to occur when too many goods are produced by one sector, because of principle of diminishing returns and it always comes into existence in the long run.

**Alternative Public Sector Allocation Instruments**

The following are the instruments where the government’s power and compulsion prevails:

* The public sector both finances and produces the economic good. Moreover, it produces the component parts of the good and owns or directly controls all resources used in the production of these components. In addition, it supplies the good “free of direct charge” to all users.
* Public sector finances and produces the final good, but it purchases some or all intermediate components or productive resources from the market. The good is supplied without charge to all users and is paid through taxes. The approximate directness and comprehensiveness of the public sector influence on national defence in several countries is the example of this point.
* Monetary system is owned or basically controlled by the public sector. This point shows the approximate influence of the federal or national government on the allocation of money and banking system in the economy.
* A substantial though not complete intervention is represented by the so-called commercial principle through which the public sector produces or supplies a privately produced economic good but sells it via a user charge or price rather than supplying it free to its users. For example, the supply of water by a local body.
* The public sector may influence resource allocation by combining subsidies and direct regulation.
* Sometimes the objective of governmental allocational intervention may be to discourage consumption or production. For example, government can levy excise duty on consumption of liquor.
* The public sector can restrict entry to professions and industries through the issuance of charters, franchises, or licenses. Such policies sometimes worsen rather than improve allocational efficiency because they increase or protect monopoly power within an industry. Sometimes, however, they can improve allocation by conserving uniquely scare or important productive resources.
* Government by its ability to define property rights, the public sector can create an environment whereby the market process will exert particular allocation outcome.

**PROBLEM OF REVEALING PREFERENCE AND THEIR AGGREGATION**

The preference for goods and services differ among the individuals. But there is no problem of reconciling the varying preferences in market sector of the economy. This is because the effective demands are summed up in the market and production adjusts accordingly. But the automatic summation of the effective demands does not take place in case of public goods. This is due to the reason that the amounts to be produced and determined by a single non-market decision. In case of identical preference patterns, there is no difficulty. But the individual preferences for the public good also differ while the quantity available to each person is the same because the principle of exclusion is not applicable. The amounts cannot be adjusted to each individual’s wants because of the indivisible nature of public goods. To resolve this conflict and to attain optimum society’s allocation of resources, the actual outputs of public goods are determined by the government through the operation of political process.

A political process is used to

* Obtain revelation of preferences
* To furnish it with the fiscal resources needed to pay for them. This is done through voting.

Thus, in democratic societies decisions about the social goods are taken by the elected representatives of the people

* These decisions must reflect the preferences of the voters (consumers)
* The act of taking decisions by the elected representatives is like the market mechanism.
* As in the market system profit maximisation is motive of the entrepreneurs so is the objective of politicians to maximise their chances of re-election. Hence, they are guided by the objective of vote maximisation.

**RECONCILIATION OF CONFLICTING PREFERENCES**

* **The Unanimity Rule:** At one extreme the unanimity rule, or complete-consensus rule, could be employed, i.e., only those actions relating to output of public goods on which there is complete agreement can justifiably be undertaken. This rule is closely related to the Pereto criterion of economic welfare. According to this rule, economic welfare increases if one person benefits without anyone suffering from any loss. Given rational behaviour, any change in the output of public goods benefitting one or more persons and injuring no one. One will receive unanimous support, whereas changes not meeting the requirement will not. This rule was first developed and defended by Knut Wicksell. This rule avoids what may be called the “external cost” of change, that is, injury to persons who do not wish the change, and provides maximum protection of minority interests. Under this rule, for making any scheme feasible, persons with divergent views would be required to reach a compromise, possibly through vote trading.
* **Simple Majority Rule:** The most frequently used rule is that of simple majority. Under this system each individual has one vote. Their willingness and unwillingness in the form of ‘Yes’ or ‘No’ is counted and the simple majority wins. In a democratic country like India, the simple majority rule is accepted in specific circumstances like amendment of the Constitution. In India, the fiscal decisions on taxing and spending are acceptable if approved by a simple majority i.e., 51 percent of the democratically elected representatives.

The merit of this rule is that it is workable and does not block the interests of the largest number in the society, but the claim cannot be made that it maximises economic welfare, since benefits received and losses suffered by various individuals cannot be compared.

* **Paradox of Voting:** There is the possibility that the system of simple majority rule voting may fail to give an unambiguous choice between alternatives

|  |  |  |  |
| --- | --- | --- | --- |
| **Rank** | **Individuals**  **A B C** | | |
| 1  2  3 | X  Y  Z | Z  X  Y | Y  Z  X |

The above table illustrates the preference between issues X, Y, and Z of a community composed of A, B, C. It shows that issues are considered in pairs, a majority vote would choose are considered in pairs, a majority vote would choose X above Y and Y above Z but Z above X; this pattern of choice is said to be intransitive. If voting is allowed to continue without limit a process of cycling is generated as one policy defeats another in the unending cycle.

* **Qualified Majority Rule:** Kenneth Arrow raised a basic point about the collective rationality of the political process. He argued that preferences could best be revealed through qualified majority voting, which is also known as ‘relative unanimity’. According to his view, the fiscal decisions should be accepted only if approved by more than a simple majority i.e., 51 percent of the democratically elected representatives.
* **Arrow’s Impossibility Theorem:** Kenneth Arrow provided an insight in to the problems involved in making society’s decisions consistent with individual preferences through group voting in the political process. He argues that following conditions must be met in order to reach preferable society’s decisions.

**a.** Social choices must be transitive (Consistent)

b. The social welfare function must be non perverse.

c. The ranking of the choices in the social welfare function must be independent of the ranking by individuals.

d. Voters must have free choices among the alternative policies.

e. Social choices must not be dictetatorial.

**REPRESENTATIVE DEMOCRACY**

Individual voters participate directly in the decision process to discuss the theory of Representative democracy. It is evident that the degree of direct participation differs among countries, it is usually only at the local level that fiscal decisions are made in referendum style.

**Role of Politicians:** The role of the politicians in the context of democracy is not only to put forward attractive programmes and policies in order to win, but to implement a given set of voter preferences. Political leadership may also exert an influence on performance patterns and thereby on the legislative outcome. The politician is also called upon to respond not only to voter’s preferences but also generate new preferences which he thinks to be desirable.

**Role of Bureaucracy:** Generally bureaus are supportive of the legislative’s interest.They may act responsible in the interests of society.

**Interest Groups:** One way that people can reveal their preferences is by voting; an other way is by associating with likeminded persons to form interest groups. Some of these groups seek to advance the objective of their members.

**THE THEORY OF SECOND BEST**

The theory of the second best was formalized by Richard Lipsey and Kelvin Lancaster in 1956. The primary focus of the theory is what happens when the optimum conditions are not satisfied in an economic model. Lipsey and Lancaster’s results have important implications for the understanding of not only trade policies but also many other government policies.

In this section, we will provide an overview of the main results and indicate some of the implications for trade policy analysis. We will then consider various applications of the theory to international trade policy issues.

First of all, one must note that economic models consist of exercises in which a set of assumptions is used to deduce a series of logical conclusions. The solution of a model is referred to as equilibrium. Equilibrium is typically described by explaining the conditions or relationships that must be satisfied in order for the equilibrium to be realized. These are called the equilibrium conditions. In economic models, these conditions arise from the maximizing behaviour of producers and consumers. Thus, the solution is also called an optimum.

For example, a standard perfectly competitive model includes the following equilibrium conditions:

(1) The output price is equal to the marginal cost for each firm in an industry

(2) The ratio of prices between any two goods is equal to each consumer’s marginal rate of substitution between the two goods

(3) The long-run profit of each firm is equal to zero, and

(4) Supply of all goods is equal to demand for all goods. In a general equilibrium model with many consumers, firms, industries, and markets, there will be numerous equilibrium conditions that must be satisfied simultaneously.

An economic rationale for government intervention in the private market arises whenever there are uncorrected market imperfections or distortions. In these circumstances, the economy is characterized by a second-best rather than a first-best equilibrium. In the best of cases, the government policy can correct the distortions completely and the economy would revert back to the state under economic nirvana. If the distortion is not corrected completely, then at least the new equilibrium conditions, altered by the presence of the distortion, can all be satisfied. In either case, an appropriate government policy can act to correct or reduce the detrimental effects of the market imperfection or distortion, raise economic efficiency, and improve national welfare.

It is for this reason that many types of trade policies can be shown to improve national welfare. Trade policies, chosen appropriate to the market circumstances, act to correct the imperfections or distortions. This remains true even though the trade policies themselves would act to reduce economic efficiency if applied starting from a state of economic nirvana. What happens is that the policy corrects the distortion or imperfection and thus raises national welfare by more than the loss in welfare arising from the application of the policy.

Many different types of policies can be applied, even for the same distortion or imperfection. Governments can apply taxes, subsidies, or quantitative restrictions. They can apply these to production, to consumption, or to factor usage. Sometimes they even apply two or more of these policies simultaneously in the same market. Trade policies, like tariffs or export taxes, are designed to directly affect the flow of goods and services between countries. Domestic policies, like production subsidies or consumption taxes, are directed at a particular activity that occurs within the country but is not targeted directly at trade flows.

One prominent area of trade policy research focuses on identifying the optimal policy to be used in a particular second-best equilibrium situation. Invariably, this research has considered multiple policy options in any one situation and has attempted to rank order the potential policies in terms of their efficiency-enhancing capabilities. As with the ranking of equilibrium described above, the ranking of policy options is also typically characterized using the first-best and second-best labels.

Thus, the ideal or optimal policy choice in the presence of a particular market distortion or imperfection is referred to as a first-best policy. The first-best policy will raise national welfare, or enhance aggregate economic efficiency, to the greatest extent possible in a particular situation.

Many other policies can often be applied, some of which would improve welfare. If any such policy raises welfare to a lesser degree than a first-best policy, then it would be called a second-best policy. If there are many policy options that are inferior to the first-best policy, then it is common to refer to them all as second-best policies. Only if one can definitively rank three or more policy options would one ever refer to a third-best or fourth-best policy. Since these rankings are often difficult, third-best (and so on) policies are not commonly denoted.

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**Module-4**

**Public Expenditure**

**Contents:**

* Theories of Public Expenditure
* Budgeting in the Public Sector
* Major Heads of Public Expenditure/ Classification of Public Expenditure
* Control and Accountability
* Expenditure Evaluation
* Reforms in Expenditure Budgeting
* Zero Based Budgeting

**Module-4**

**Public Expenditure**

**INTRODUCTION**

Government spending or public expenditure is classified by economists into three main types. Government acquisition of goods and services for current use to directly satisfy individual or collective needs of the members of the community is classed as [government final consumption expenditure](http://en.wikipedia.org/wiki/Government_final_consumption_expenditure). Government acquisition of goods and services [intended to create future benefits](http://en.wikipedia.org/wiki/Invest#Economics), such as infrastructure investment or research spending, is classed as government investment ([gross fixed capital formation](http://en.wikipedia.org/wiki/Gross_fixed_capital_formation)), which usually is the largest part of the government [gross capital formation](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Gross_capital_formation). Acquisition of goods and services is made through own production by the government (using the government's labour force, fixed assets and purchased goods and services for intermediate consumption) or through purchases of goods and services from market producers. Government expenditures that are not acquisition of goods and services, and instead just represent transfers of money, such as social security payments, are called [transfer payments](http://en.wikipedia.org/wiki/Transfer_payment). Government spending can be financed by [seigniorage](http://en.wikipedia.org/wiki/Seigniorage), [taxes](http://en.wikipedia.org/wiki/Taxes), or government [borrowing](http://en.wikipedia.org/wiki/Debt).

The first two types of government spending, namely government final consumption expenditure and government gross capital formation, together constitute one of the major components of [gross domestic product](http://en.wikipedia.org/wiki/Gross_domestic_product). [John Maynard Keynes](http://en.wikipedia.org/wiki/John_Maynard_Keynes) was one of the first [economists](http://en.wikipedia.org/wiki/Economists) to advocate government [deficit spending](http://en.wikipedia.org/wiki/Deficit_spending) as part of the [fiscal policy](http://en.wikipedia.org/wiki/Fiscal_policy) response to an [economic contraction](http://en.wikipedia.org/wiki/Recession). In [Keynesian economics](http://en.wikipedia.org/wiki/Keynesian_economics), increased government spending is thought to raise [aggregate demand](http://en.wikipedia.org/wiki/Aggregate_demand) and increase [consumption](http://en.wikipedia.org/wiki/Consumption_(economics)).

[Classical economists](http://en.wikipedia.org/wiki/Classical_economists) and [Austrian economists](http://en.wikipedia.org/wiki/Austrian_economists), however, believe that increased government spending exacerbates a [economic contraction](http://en.wikipedia.org/wiki/Recession) by shifting resources from the private sector, which they consider productive, to the public sector, which they consider unproductive. According to Austrian economists, the reason the [Great Depression](http://en.wikipedia.org/wiki/Great_Depression) lasted as long as it did was because of significant government spending and government regulation of the economy.

**BASIC CONCEPTS OF PUBLIC EXPENDITURE**

Public expenditure is the value of goods and services bought by the State and its articulations.

Public expenditure plays four main roles:

1. It contributes to current effective demand;  
2. It expresses a coordinated impulse on the economy, which can be used for stabilization, business cycle inversion, and growth purposes;  
3. It increases the public endowment of goods for everybody;  
4. It gives rise to positive externalities to economy and society, the more so through its capital component.

With its prioritized structure and its peculiar decision-making processes, it substantiates the prevailing kind of State. In democracy, public expenditure is an expression of people's will, managed through political parties and institutions. At the same time, public expenditure is characterised by a high degree of inertia and law-dependency, which tempers the will of the current majority.  
  
Public expenditure can be financed through [taxes](http://www.economicswebinstitute.org/glossary/taxrev.htm), public debt, [money](http://www.economicswebinstitute.org/glossary/money.htm) emission, international aid.

**Composition**  
  
First, public expenditure can be classified in terms of the kind of goods and services bought, also with very general items:

1. Capital goods;  
2. Consumption goods;  
3. Personnel expenditure

By contrast, public expenditure in national accounts does not comprehend mere transfers among social groups, as it is the case of pension schemes. Payments of interest on public debt are not comprehended as well.

Second, public expenditure can be classified according to the official body and organization from which budget it is paid, as for example:

1. The central state and its ministries;  
2. Regional and local authorities;  
3. Separate public bodies;  
4. International organizations.

Here we should note that public expenditure usually does not consolidate state-owned firms. Their capital goods expenditure is added to investment.

Third, public expenditure can be classified according to the **macro-function** at which it is directed:

1.Justice and public order;  
2. Infrastructure (roads, railways)  
3. Military system  
4. Education system  
5. Health care  
6. Support for the poor, the old, the disadvantaged  
7. Support for firms, export and production in general  
8. Special policy expenditure (foreign aid, integrated fight against drugs).

In different places and over time, those macro-functions have largely changed their level of priority and even the social acceptance of the idea that it is the State that must care of them.

In particular, as a very sketched framework, one may distinguish at least three general models of state to which public expenditure corresponds:

1. The **minimal state**, where only justice, public order, foreign policy and some other basic functions should be carried out by the state, relying on private initiative for the others;  
2. The **welfare state**, where the State cares about the people's well-being directly, also through expenditure in schooling, health, support for the poor, the old, the disadvantages;  
3. The **developmental state**, where the State takes the responsibility of fostering economic development, also through expenditure in infrastructure, support for firms, export and production in general.

Both the welfare and developmental state include the items of the minimal state. Military expenditure and special policies are common traits of the three models, maybe in different proportions.   
Comparing macro-function shares in public expenditure, one can get insights in the kind of state under analysis.

Needless to say, the State does not exert its influence on economy and society through public expenditure only, but also for example through laws.

**Determinants**

Public expenditure is determined by political will of the leading forces in the state: their priorities, their desired state model, and their interpretation of current economic and political phase. Past choices have relevant impact on public expenditure because of inertia and incrementalism. Bureaucracy may play an important decision role for the actual expenditure.

Sometimes considered as a completely exogenous variable, the public expenditure would thus be fully in the hand of political decision-makers without dependency from the economic context. Yet, policy makers may turn out to follow an anti-cyclical broad control of public expenditure. Automatic stabilizers may be at work, as with the case of support schemes for [unemployment](http://www.economicswebinstitute.org/glossary/unemploy.htm): in this case, higher unemployment and disappointing [GDP](http://www.economicswebinstitute.org/glossary/gdp.htm) growth would lead to higher public expenditure through unemployment benefits and financial support to firms.

In a different political and institutional context, public expenditure may, instead, positively respond to state revenues. Higher revenues (and maybe even a public surplus) may lead to higher public expenditure. Symmetrically, if there is an upper limit to public deficit and, because of a recession, [tax revenue](http://www.economicswebinstitute.org/glossary/taxrev.htm) fall, the State may be forced to cut public expenditure. In this context, public expenditure would turn out to be pro-cyclical.

**Impact on other variables**

A GDP component as it is, public expenditure has an immediate impact on [GDP](http://www.economicswebinstitute.org/glossary/gdp.htm). An increase of public expenditure rises GDP by the same amount, other things equal. Moreover, since income is an important determinant of consumption, that increase of income will be followed by a rise in [consumption](http://www.economicswebinstitute.org/glossary/cons.htm): a [positive feedback loop](http://www.economicswebinstitute.org/glossary/feedback.htm) has been triggered between consumption and income, exactly as in the case of shocks in [export](http://www.economicswebinstitute.org/glossary/exports.htm), [investment](http://www.economicswebinstitute.org/glossary/invest.htm) or autonomous consumption.

The full extent of this mechanism will depend, however, by the reactions of the other economic agents. Firms have to decide whether to increase production or [prices](http://www.economicswebinstitute.org/glossary/pricel.htm) in response to demand.

Moreover, if consumers interpret the increase in public expenditure as a fall in their disposable income (i.e. after-tax income), [consumption](http://www.economicswebinstitute.org/glossary/cons.htm) may fall accordingly. Public expenditure is also told to crowd-out [investment](http://www.economicswebinstitute.org/glossary/invest.htm), possibly through an [interest rate](http://www.economicswebinstitute.org/glossary/interest.htm) increase, further leading, in a floating [exchange rate](http://www.economicswebinstitute.org/glossary/exchrate.htm) regime, to a currency appreciation. [Exports](http://www.economicswebinstitute.org/glossary/exports.htm) would then be displaced as well.

In more microeconomic terms, public expenditure may be directed to consumer goods and thus substitute families' expenditure, as with the case of health drugs. By contrast, in other cases, as with education, public expenditure may trigger further consumption (books and all the other goods whose consumption depend on culture levels).

**Long-term trends**

In developed countries, it has always grown, whatever the political orientation of the government. Just the tempo can change. With a few exceptions, only under extremely strong constraints has public expenditure been cut in absolute terms. Wars are episodes of extremely high public expenditure, followed usually by a return to normality.

**Business cycle behavior**  
  
Public expenditure may turn out to be pro-cyclical or anti-cyclical depending on the political and institutional attitude toward public deficit, [as we said](http://www.economicswebinstitute.org/glossary/pubexp.htm#determinants). Still, real world data show often little reaction of public expenditure to the cycle. Most cycles show public expenditure as a stabilizing tool just keeping the same dynamics when the rest "goes wrong".

**PURE THEORY OF PUBLIC EXPENDITURE**

In 1954 Paul Samuelson published his landmark paper [*The Pure Theory of Public Expenditure*](http://www.ses.unam.mx/docencia/2007II/Lecturas/Mod3_Samuelson.pdf), which formalized the concept of public goods (which he called "collective consumption goods") -- i.e. goods that are non-rival and non-excludable. He highlighted the market failure of free-riding when he wrote: "it is in the selfish interest of each person to give false signals, to pretend to have less interest in a given collective consumption activity than he really has". His paper showed that "no decentralized pricing system can serve to determine optimally these levels of collective consumption".

Excludability is the ability of producers to detect and prevent uncompensating consumption of their products. Rivalry is the inability of multiple consumers to consume the same good. A public good is defined as a non-rival non-excludable good, such as national defense. Because public goods are not excludable, they get under-produced. The pricing system cannot force consumers to reveal their demand for purely non-excludable goods, and so cannot force producers to meet that demand.

The evidence for under-production of public goods is so overwhelming that, as anarcholibertarian professor Walter Block [admits](http://www.mises.org/etexts/defensemyth.pdf) about the resulting justification for state intervention, "virtually all economists accept this argument. There is not a single mainstream text dealing with the subject which demurs from it." Exhibit 1 gives the clear understanding of the theory.

**PURE THEORY OF PUBLIC EXPENDITURE:**

**BASIC IDEA**

The pure theory of public expenditure was propounded in 1954/1955 by Paul Anthony Samuelson in a general equilibrium model with existence of one private good and one public good. The idea is that different individuals choose different combinations of private good and public good. Since the whole of public good is equally available to all the individuals, because of non-rivalness in consumption, it is only the sacrifice in terms of private good by different individuals that matters. This sacrifice is actually the tax paid by different individuals.

The basic idea can be captured in a little simpler manner than using production possibility curve of the society and indifference curves of the individuals constituting society, which is the framework adopted by Samuelson. In contrast to general equilibrium framework, we are adopting here partial equilibrium framework. Let there be two individuals A and B in the society, which produces private good X and public good Y. Price of purchase of public good Y is in terms of X, call it tax. In the case of a pure private good, we know there prevails one single price at different individuals normally buy different amount. By contrast, we can see that there can be only one quantity of a pure public good, which is equally available to (or enjoyed by) everybody but they may pay different prices (taxes).

In the case of a private good, we carry out horizontal summation of individual demand curves. The equilibrium quantity produced is allocated to different consumers at equilibrium price according to strength of their individual demand curves. Noting that demand curves reflect marginal revenues and supply curves reflect marginal costs, we may write the condition of equilibrium in a competitive market as

MRA=MRB=MC.

In the case of a public good, we can carry out vertical summation of individual demand curves for whatever quantity is produced, because of non-rivalness in consumption, will be as a whole consumed, and therefore equally, by everybody. This means that individual marginal revenues are summed up to equal the marginal cost of production. The competitive equilibrium condition could then be written as

MRA+MRB=MC.

In terms of general equilibrium model, one may recall, for two private goods X1 and X2 and two individuals A and B the condition of equilibrium is MRSA=MRSB=MTS.

By contrast, for a world of a private good X and a public good Y and two individuals

A and B, the condition of equilibrium would be

MRSA=MRSB=MTS.

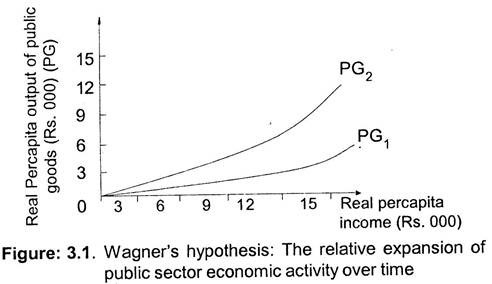
MRS and MTS stand respectively for marginal rate of substitution and marginal rate of technical substitution.

Wicksell had long ago realized that the individual demand curves might be a pseudocharacter as people may be tempted to conceal their preferences. Whatever public good is supplied and in whatever quantity, it is all available by definition to all, an individual may keep quiet about his need as he can enjoy its fruit without paying. It may mean that public goods may be collectively underprovided.

**Theories about the Rise in Public Expenditure**

There are two broad theories about public expenditure. The first is by the German economist **Adolph Wagner** (1875-1917). He did a study of historical facts about the German economy and propounded what is called, ***The Law of Increasing State Activities.*** He suggested that activities of various levels of government have an inherent tendency to increase over time. The government sector in the economy rises faster than the economy as a whole. There is consequently a rise in government expenditure. Now, this rise in government expenditure can be expressed in many ways: (a) a rise in absolute levels of government expenditure, (b) a rise in the ratio of government expenditure to GNP, (c) a rise in the proportion of the public sector in the economy. Even in the case of (a), the absolute rise may be in nominal or real terms. One should also adjust for a secular increase in population and see the rise in per capita terms. It is not clear in which of the above senses Wagner was talking about the rise in government expenditure, though Musgrave suggests that the correctmeasure should be (c). Also, for (b) above one should as well look at the GNP *elasticity* of government expenditure.

Wagner’s law is mainly applicable to modern progressive governments. According to Wagner, it is applicable mainly in the initial stages of modern government activities. He felt that as modern industrial society develops, there would be increasing pressure for social progress and there would be attempts to make business and industry more socially conscious. The public sector and government activities would therefore rise.



The second main theory about rise in government expenditure is by Jack Wiseman

and Alan Peacock and is called the **Wiseman-Peacock hypothesis**. They studied public expenditure in Britain for the period 1890-1955 and on this basis suggested that public expenditure does not increase in a smooth and continuous manner but in discrete jumps or in a step like manner. This is mainly because unexpected social disturbances and events take place and government expenditure has to rise to meet the requirements. Of course, they suggested that the existing revenue is in most cases not adequate to meet the expenditure requirements, and revenues, particularly taxes, rise to a new level. This hypothesis is about occurrence of unusual and abnormal events, but it is largely true that government expenditures rise over time in almost all modern societies.

Buchanan and Tullock based on U.S. experience, have argued that there is an increasing discrepancy between government expenditure and government output, with the former tending to run ahead of the latter. They give two reasons for this.

First, unlike the private sector, the expenditure on government officials increases faster than the corresponding rise in their output.

Secondly, with the growth of welfare activities and social security, the proportion of people receiving transfer payments from the government increases.

What are the main reasons for the secular rise in government activities and expenditures over time? First, the traditional functions of the State were expanding. Defence was receiving greater emphasis and expenditure on it was increasing. Wages of government officials was going up. Second, state activities around welfare measures were increasing in their coverage. Third, investment activities of the State have been expanding. Fourth, population itself has been going up necessitating a hire level of committed expenditure on the part of the State. Fifth, related to the previous point on population is increasing urbanisation, which requires a much larger per capita expenditure on civic amenities. Sixth, modern governments need to borrow and thus public expenditure in the form of repayment of loans and increasing

costs of debt servicing go up. Finally, increasing use of planning and consequently

capital accumulation by the government tends to increase public expenditure.

**Budgeting in the Public Sector:**

**Budget** is the annual financial statement of the government. It is the statement of estimated receipts and expenditure of the government in respect of every financial year which runs from 1st April to 31st March. **Balanced Budget** occurs when the total sum of money a government collects in a year is equal to the amount it spends on goods, services and debt interest during a financial year. In other words, when the proposed expenditure and anticipated revenue of the government are equal, it is called as balanced budget. When public revenue exceeds the public expenditure, it is called as **surplus budget.** When the proposed expenditure of the government exceeds its anticipated revenue, it is called as **deficit budget.**

**Performance Budget** is the budget of the Ministry/ Department in terms of functions, programmes and activities and gives appraisal reports separately in respect of major central sector projects/programmes estimated to cost Rs.100 crores or more. It also includes a statement on the programmes and performance of the various public sector undertakings under the ministry/department indicating among other things, the capacity installed and utilized, physical targets and achievements, results of operation, return on capital etc. Performance budget serves the management as a tool of administrative and financial control in the implementation of development programmes. **Zero base budgeting** refers to framing a budget for the ensuring year of the government by starting from ground zero instead of treating the current budget as the starting point or the base.

The **Budget** indicates the receipts and payments of government under three parts in which government accounts are kept namely,

1. **Consolidated Fund,**
2. **Contingency Fund** and
3. **Public Account.**

**Consolidated Fund:** All revenues received by government, loans raised by it, and also granted by its receipts from recoveries of loans granted by it, form the consolidated fund. All expenditure of the government is incurred from the consolidated fund and no amount can be withdrawn from the fund without authorization from legislature.

**Contingency Fund:** This fund is to meet the urgent unforeseen expenditure of the government without parliament/legislature’s authorization. The fund is at the disposal of the president/governor to incur such expenditure. Parliamentary approval for such expenditure and for withdrawal of an equivalent amount from the consolidated fund is subsequently obtained and the amount spent from contingency fund is recouped to the fund.

**Public Account:** There are certain other transactions which enter government accounts, in respect of which government acts more as a banker. For example, transactions relating to provident funds, small savings collections, other deposits, etc. These are kept in the public account and the connected disbursements are made. Generally speaking, public account funds do not belong to government and have to be paid back some time or the other, to the persons and authorities who deposited them. Parliamentary authorization for payments from the public account is, therefore, not required.

In a few cases, a part of the revenue of the government is set apart in separate funds for expenditure on specific objects like sugar development, replacement of depreciated assets of commercial undertaking etc. These amounts are withdrawn from consolidated fund with the approval of parliament and kept in the public account for expenditure on the specific objects.

The Budget comprises of **revenue budget** and **capital budget**.

**Revenue Budget:** It consists of the revenue receipts of government (tax revenues and other revenues) and the expenditure. Tax revenues comprise proceeds of taxes and other duties levied by the union. The estimates of revenue receipts shown in the Annual Financial Statement take into account the effect of the taxation proposals made in the finance bill. Other receipts of government mainly consist of interest and dividend on investments made by the government, fees, and other receipts for services rendered by the government.

**Revenue Expenditure** is for the normal running of government departments and various services, interest charges on debt incurred by government, subsidies etc. Broadly speaking, expenditure which does not result in creation of assets is treated as revenue expenditure. All grants given to state government and other parties are also treated as revenue expenditure even though some of the grants may be for creation of assets.

**Capital Budget** consists of capital receipts and payments of government. Items of **capital receipts** are loans raised by government from public which are called Market loans, borrowings by government from Reserve Bank and other parties through sale of Treasury Bills, loans received from foreign governments and bodies and recoveries of loans granted by central government to state and union Territory government and other parties.

**Capital Payments** consist of capital expenditure on acquisition of assets like land, building, machinery, equipment as also investments in shares, etc. and loans and advances granted by central government to the States and Union Territory governments, government companies, corporations and other parties. Capital Budget incorporates transactions in public account also.

**Voted and Charged items of expenditure:** Certain items of expenditure like emoluments of the President/Governor, salaries and allowances of the Chairman and the Deputy chairman of the Rajya Sabha/Legilative Council and the Speaker and Deputy Speaker of the Lok Sabha/Legislature, salaries, allowances and pensions of judges of the supreme court/high court and the Comptroller and Auditor – General of India, interest on and repayment of loans raised by government and payments made to satisfy decrees of courts etc., are charged on the consolidated fund and are not required to be voted by the Lok Sabha/Legislature. Budget shows the expenditure charged on the consolidated fund separately.

**Demands for Grants:** As per article 113 of the constitution, the estimates of expenditure from the consolidated fund included in the Budget and required to be voted by Lok Sabha/Legislature are submitted in the form of Demands for Grants. Generally, one demand for grant is presented in respect of each ministry except in case of large ministries.

Each demand normally includes the total provisions required for a service, that is, provisions on account of revenue expenditure, capital expenditure, grants to state and union territory governments and also loans and advances relating to the service. A separate demand for each Union Territory without legislature is presented.

Where the provision for a service is entirely for expenditure charged on consolidated fund, for example interest payments, a separate **Appropriation**, as distinct from a demand is presented for that expenditure and it is not required to be voted by parliament.

Where expenditure on a service includes both ‘Voted’ and ‘Charged’ items of expenditure, the latter are also included in the Demand presented for that service but the ‘voted’ and ‘charged’ provisions are shown separately in that demand. Each demand for grants gives the totals of ‘voted’ and ‘charged’ expenditure as also the ‘revenue’ and ‘capital’ expenditure included in the Demand separately and also the grand total of the amount of expenditure for which Demand is presented. This is followed by the estimates of expenditure under different major heads of account. The break – up of the expenditure under each major head between ‘Plan’ and Non – Plan is also given. The summery of Demands for Grants is given at the beginning of the Demand for Grants document, whereas the details of ‘New Instrument of Service’ such as formation of a new company, under taking a new scheme etc., if any, are indicated at the end.

**Finance Bill:** The proposals of government for levy of new taxes, modification of the existing tax structure or continuance of the existing tax structure beyond the period approved by parliament are submitted to parliament through the Finance Bill.

The excess of government’s revenue expenditure over revenue receipts constitutes **revenue deficit** of a government.When total government expenditure exceeds total receipts (revenue receipts + capital receipts + borrowings) then it is shown as **budgetary deficit**.

The difference between the total expenditure of government by way of revenue, capital and loans net of repayments on the one hand and revenue receipts of government and capital receipts which are not in the nature of borrowing but which finally accrue to government on the other, constitutes **fiscal deficit**. Fiscal deficit is budgetary deficit plus loans taken by government.

**Fiscal deficit = Revenue Deficit + Capital expenditure** or

**Total expenditure - revenue receipts** or

**Revenue receipts + Recoveries of loans + other receipts – Total expenditure**

**Primary Deficit** is measured as fiscal deficit reduced by gross interest payments.

**Major Heads of Public Expenditure or Classification of Public Expenditure:**

Classification of public expenditure refers to the systematic arrangement of differ­ent items of state expenditure, on some specified economic basis. Following is the classification of public expenditure made by different writers.

#### 1. Benefit Criteria:

A common classification of public expenditure adopted by the 19thcentury writers is based on the principle of Benefit Conferred. Such as the division adopted by Cohn and Plehn.

**They divided public ex­penditure under the following four heads:**

(a) Firstly, expenditure which confers common benefit on all citi­zens or taxpayers, example: defence, universal education given to the residents free of charge etc.

(b) Secondly, expenditure conferring special benefit on some per­sons or on certain classes, example; expenditure on poor relief.

(c) Thirdly, that class of public expenditure which confers a special benefits on certain people and at the same time a common ben­efit on all the others, e.g., the administration of justice.

(d) Fourthly, those items of expenditure which confer a special ben­efit only on some individuals; e.g., certain industries specially favored by the state (granting subsidy).

An obvious objection to this classification is that all public ex­penditure is for the common and public interest.

It is very difficult to draw distinction between special benefit and common benefit con­ferred. Satisfaction of special benefit may lead to generation of com­mon benefit. For example, expenditure on poor relief, which is specifically for the benefit of those immediately concerned, result in common benefit such as prevention of crime, satisfaction of general sense of justice etc.

As Nicholson rightly observed **“public expen­diture which does not confer some common benefit or answer some public purpose ought not to exist in a modern state”,** Hence Nicholson attempted to give a more scientific classification of expenditure.

#### 2. Revenue Criteria:

F.S. Nicholson classified public expenditure according to the amount of revenue the state realizes in return for the services which it per­forms through public expenditure.

**He gives the following four classes of public expenditure:**

(a) Firstly expenditure without any direct return of revenue, example poor relief and also the losses sustained in war.

(b) Secondly, expenditure without any direct return of revenue, but indirectly beneficial to revenue. For example free education. Better educated persons are better tax payers and less expensive citi­zen than paupers and criminals.

(c) Thirdly, expenditure with partial direct return of revenue, example education for which fees are charged.

(d) Fourthly expenditure with full return of revenue or even profit. For example investment in public undertakings, railways, post and telegraph etc.

This classification is also subject to criticism. This classifica­tion is overlapping. Separation between the items is not clearly marked. This classification failed to bring out the essential differ­ences in kind between the several forms of expenditure.

For ex­ample, defence and poor relief falls under the first category, however they also confer indirect benefit to revenue. By ensuring peace and tranquility defence ensures the smooth growth of productive activity and national income. This in turn will benefit public revenue consid­erably.

#### 3. Functional Criteria:

Another classification of public expenditure is proposed by H.C. Adams. Functional classification is based on a classification of the various functions actually performed by public authorities.

**Adams classifies expenditure under three main functions of government:**

**(i) Protective Functions:**

This includes expenditure on defence, police, judiciary, social disease, prisons etc.

**(ii) Commercial Functions:**

In this category include expenditure which helps the development of commerce and trade. Services sold to the citizens for a price (e.g., Post office, Railway, Insur­ance), subsidies and bounties granted etc., are examples of com­mercial functions

**(iii) Developmental Functions:**

In this category include expendi­ture that helps to develop the resources of the country. Expendi­ture under this category includes expenditure on education, pro­vision of public recreation, public works, public health etc.

This division is not free from imperfections. There is no clear cut dividing line between institutions maintaining law and order and those that promote progress. Expenditure incurred for protection is also capable of promoting development Prof. Adams states that with the progress of society, the protective expenditure trend to decline. But this preposition is not supported by historical facts.

#### 4. J.S. Mills Classification:

J.S. Mill based his division on the wants of the state, which in turn is determined by the functions of the state.

He divides expenditure between obligatory or necessary and optional. This classification takes into account the nature of expenditure. Expenditure incurred on defence, justice and maintenance of economic institutions is obligatory.

Owing to past contracts and other legal commitments, coupled with the concept of sovereignty, the state is not free to de­cide whether to incur this type of expenditure or not. It is mandatory on the part of the government to incur obligatory expenditure. Whereas expenditure on social security measures is optional.

The state can postpone or incur this type of expenditure depending upon the availability of resources. It is not compulsory in nature. It can, if time warrants can be postponed to a future date.

#### 5. Shirra’s Classification:

Prof. Findlay Shirras classified public expenditure into (a) Primary expenditure and (b) Secondary expenditure. Primary expenditure includes all those expenditures which governments are obliged to undertake, it is mandatory on the part of the government to incur these expenditure.

It includes expenditure on defence, maintenance of law and order, civil administration, payment of debt etc. These types of expenditures are essential for the existence of the state. All other expenditures, other than those under the category of primary expenditure are grouped into secondary expenditure.

It includes ex­penditure on education, public health, poor relief, unemployment re­lief and other expenses on social security measures.

#### ****6. Roscher’s Classification:****

**Prof. Roscher classified public expenditure into three groups namely:**

(a) Necessary,

(b) Useful, and

(c) Superfluous.

Necessary expendi­ture is that which the state has to incur and which cannot be post­poned to a future date. Best example is expenditure on administra­tion. Useful expenditure is that which is desired, but can be post­poned.

Superfluous expenditure is that which the state may or may not occur. It is otherwise called ornamental expenditure.

#### 7. Dalton’s Classification:

Instead of following some strictly logical methods Prof. Dalton give a practical or empirical classification. According to Dalton a broad distinction may be drawn between public expenditure designed on the one hand to preserve the social life of the community against violent attack whether external or internal and on the other, to im­prove the quality of the social life.

In other words, the object of public expenditure may be either to keep social life secure and ordered or to make that secure and ordered life better worth living whether from an economic or non-economic point of view. Hence Prof. Dalton clas­sifies public expenditure into two categories – grants and purchase price.

When the state incurs expenditure and does not get any commodity or service in return, the expenditure is classified as a grant. For example, expenditure on poor relief, payments of old age social insurance etc. are grants. When the state acquires or gets some commodity or service in return the expenditure is a purchase price.

For example, the salaries of government employees, the price paid for purchasing a typewriter etc., are purchase price. To quote Dalton, **“payments by a public authority to any of its employees by way of salaries and wages or to contractors whom it employs, are pur­chase prices. On the other hand payments of old age social insur­ance are grants”.**

Dalton says that some public expenditure may be partly a purchase price and partly a grant. This is so when the state pays a price higher than what a private buyer would pay. The differ­ence between the two is the element of grant in a purchase price.

Dalton thinks that interest on public debts and pensions are grants if looked at from the point of view of the present, as in the present the state secure no commodity or service by incurring this expenditure.

However, if this expenditure is looked at from a longer point of view then the state pays interest in return for the loans that is secured in an earlier period. Similarly pensions are a payment for service ren­dered in the past.

Dalton also made a distinction between direct and indirect grants. Direct grants are those whose benefits accrue to the persons who secure the grants for example, poor relief. On the other hand indirect grants are those where part of the benefit accrues to a person other than recipient of the grant, for example, subsidies. Part of the sub­sidy may be passed on to the purchaser of the commodity in the form of lower prices.

#### 8. A.C. Pigou’s Classification:

Pigou has classified public expenditure into transfer and non-transfer public expenditure. Pigou in the revised edition of his book on public finance emphasizes the distinction between Transfer Expen­diture which merely redistribute the money incomes of the mem­bers of the community and non-transfer expenditure which determines directly the uses to which part of the community’s productive resources shall be put.

Pigou says that expenditure of money by government authori­ties may be conveniently separated under two heads, expenditure that purchase current service of productive resources for the use of these authorities and expenditure which consist in payments made either gratuitously or in purchase of existing property rights to pri­vate persons.

The former group includes expenditure on navy-army, Civil service, educational service, judiciary etc. The latter includes expenditure on the payment of interests on governmental debt, pen­sion etc. In the first edition his book, the former type of expenditure, he called, exhaustive, while in the second edition he called it real expenditure.

In the third edition of he says “it is perhaps better to call them simply non-transfer expenditures. The latter type must be called transfer expenditures”.

Non-transfer expenditure implies the actual using up of com­modities and services which would otherwise have been available for some other purpose. In the social accounting sense, non-transfer expenditure always gives rise to creation of output and equivalent money income. For instance when the state pays salary to a sol­dier, then the soldier can utilize his service for no alternative pur­pose.

In the absence of this expenditure his service would have been available for some other purpose. The transfer expenditure does not create any income or output. According to Pigou “it implies only a transfer from the state to the recipients, of command over commodities and services”. For example, social expenditure on old age pension, poor relief etc.

#### 9. Mehta’s Classification:

Prof J.K. Mehta made a two way classification of public expendi­ture. He categorized public expenditure into (a) Constant expendi­ture and (b) Variable expenditure. Mehta says “constant expenditure is that, the amount of which does not depend upon the extent of the use by the people, in whose interest it is incurred and upon the service that are financed by it”.

The expenditure on defence is a clear example for constant expenditure. Variable expenditure is that which increases with every increase in the uses of public services by the people, whose benefit it is incurred. Expenditure on postal service is an example of variable expenditure. Variable expenditure varies with the number of people using the service provided by the state.

The essential feature of Mehta’s classification is that, he uses the element of cost and not benefits the basis of classification. He also recognized the fact that every item of public expenditure cannot be placed wholly under one or other class and hence a clear cut distinction cannot be drawn between them.

#### 10. Productive and Unproductive Expenditure:

Prof. Robinson classified public expenditure into productive and un­productive. Public expenditure is productive if it directly or indirectly helps to develop natural and human resources and help to increase national income.

Whereas public expenditure is unproductive if it does not add to enhancing the productive capacity of the nation. Unproductive ex­penditure is one which is consumed in the process of rendering the service.

#### 11. Economic Classification:

In the social accounting sense most of the countries have adopted economic classification. In this procedure the expenditure and in­come of public bodies are classified into two heads. They are (a) Revenue Account and (b) Capital Account. Revenue account include ordinary source of income and expenditure whereas capital ac­count include extraordinary source of income and expenditure.

Revenue expenditure includes all current expenditure on administrator including defence and public commercial undertakings. Usually expenditure which does not result in the creation of assets is treated as revenue expenditure whereas capital expenditure includes all capital transactions.

These capital payments consist of capital expenditure on acquisition of assets like land, buildings, machinery, equipment etc. Investments in shares and loans and advances granted by the central government are part of this. This classification is also known as functional classification. This classi­fication provides a more detailed breakdown of revenue and capital expenditures of the government.

#### 12. Plan and Non-Plan Expenditure:

Plan expenditure means the current development outlays as well as investment outlays. The non-plan expenditure refers to the expenditure which the government is bound to incur and cannot do without it. It includes both development and non-development ex­penditure.

A broad based classification of public expenditure is detailed above. Each classification has its own defects and omissions. How­ever, the sphere of state activity is dynamically changing in recent years. The nature and form of activities undertaken by the state is varying in length and attitude. Hence a perfect and systematic clas­sification of public expenditure is very difficult to achieve.

**Control and Accountability**

Effective expenditure control is the sine qua non of good public financial management (PFM). Fiscal rules, medium-term budget plans, and annual budgets are meaningless if expenditure cannot be controlled during execution. A lack of effective expenditure controls not only threatens macroeconomic stability and fiscal discipline, but can also call into question the integrity of the public financial management system and undermine trust in a government’s stewardship of public resources. While the institutional arrangements for raising government revenue are typically quite centralized in a national revenue authority, the expenditure of those resources involves a wide array of public entities at various levels of government, even in countries with relatively centralized PFM systems.

While expenditure control frameworks differ greatly from country to country, it is nonetheless possible to define, in a generic sense:

• The key stages of the budget execution cycle;

• The specific control objectives at each of these stages; and

• The responsibilities of the relevant actors in enforcing these controls.

However, the complexity of the expenditure chain, the precise nature of the controls exercised at each stage, and the degree of centralization varies considerably across countries and is heavily influenced by their respective administrative traditions.

Despite their different administrative origins, there has been some convergence between various expenditure control systems in recent years. This convergence is in the direction of:

• An increased focus on ex ante controls over expenditure commitments rather than ex post controls only at the payment stage of the expenditure cycle;

• A shift from controlling only cash expenditures towards controlling the accumulation of accrued liabilities as well;

• Greater devolution of responsibility for routine expenditure controls towards ministries and agencies and a more risk-based approach to the exercise of centralized controls;

• A stronger reliance on internal and external audit to ensure the integrity of financial control systems in ministries and agencies; and

• An emphasis on transparency and accountability to the legislature and the public for expenditure overruns.

Strengthening expenditure control in a particular country can, therefore, sometimes require difficult judgments about whether to reinforce traditional administrative arrangements or seek to modernize them.

**Expenditure Evaluation**

The evaluation of public expenditure can be done with the help of Cost-Benefit studies for individual programmes, policies and schemes. Performance and Outcome budgets can also help in the evaluation of Public Expenditure.

**Outcome based budgeting** is a practice of suggesting and listing of estimated outcomes of each programmes or schemes designed. Outcomes are the end products and results of various Government initiatives and interventions, including those involving partnership with the State Governments, Public Sector Undertakings, autonomous bodies and the community.

An interesting feature of outcome based budgeting is that the outcomes of programmes are measured not just in terms of Rupees but also in terms of physical units like Kilowatt of energy produced or tonnes of steel produced. Also outcomes are expressed in terms of qualitative targets and achievements to make the technique more comprehensive.

**Procedure of outcome based budgeting**

Under outcome budgeting, each Ministry presents a preliminary Outcome Budget to the Finance Ministry, which is responsible for compiling them. The Outcome Budget becomes a progress card on what various Ministries and Departments have done with the outlays in the previous annual budget. It measures the development outcomes of all government programmes and whether the money has been spent for the purpose it was sanctioned including the outcome of the fund usage. Outcome budget is a performance measurement tool that helps in:

Better service delivery

Decision-making

Evaluating programme performance and results

Communicating programme goals

Improving programme effectiveness

Make budgets cost effective

Fix accountability

Aid better scheme management

Outcome budgeting makes government programmes more result oriented, instead of outlay oriented. Under outcome budgeting, the document shows physical dimensions of the financial budget indicating the actual physical performance in the previous year, current year and targeted performance during the projected (next) year.

**Reforms in Expenditure Budgeting**

The increasing expenditure by the governments without simultaneous increases in revenue leads to deficit budgeting. Apart from promoting growth, money supply and creating employment in the country, deficit financing also creates inflationary pressure, adverse balance of payments due to higher prices and can have adverse effect on income distribution. It also increases the quantum of public debt. Hence there has been efforts by governments to reform expenditure budgeting.

In the year 2003 India passed an act called Fiscal Responsibility and Budget Management Act (FRBM Act), which was implemented since 2004. In the initial year the FRBM act successfully achieved the fiscal roadmap that stipulate reduction in the fiscal deficit and revenue deficit  by 0.3 per cent of GDP and 0.5 per cent of GDP respectively to realize the goal of fiscal deficit to the tune of  3 per cent of GDP  and revenue deficit to zero by 2008.  But due to the stimulus package that India adopted in 2008 to ward off the adverse effects of the sub- prime crisis on the Indian economy, one again fiscal deficit goals as given in the fiscal roadmap were defied. Later there was an amendment in 2011-12 in the FRBM act to include two new things- a concept of effective revenue deficit was adopted which was to be maintained at zero level while revenue deficit was stipulated to be contained at 2 per cent of GDP level whereas fiscal deficit goal was still kept at 3 per cent of the GDP level to be achieved by 2015-16. Now the target has been extended to 2017-18 in view of the slowing Indian economy in the backdrop of the European Sovereign Debt Crisis and slowing Chinese economy. The amendment also included an escape clause for such exigencies, which made it difficult to achieve the stipulated goals in the fiscal roadmap.

### ****Expenditure Management Commission****

In the 2014-15 budget speech, Finance Minister Arun Jaitley announced the constitution of Expenditure Management Commission (EMC). The Commission had been conceived as a recommendation body with the primary responsibility of suggesting major expenditure reforms that will enable the government to reduce and manage its fiscal deficit at more sustainable levels. The commission was mandated to evaluate proposals for reducing the three major subsidies (i.e. food, fertilizer and oil).

**Module-5**

**Sources of Public Revenue**

**Contents:**

* Meaning and Significance
* Sources of Public Revenue: Taxes, Commercial Revenues and Administrative Revenues
* Taxation
* Classification of Taxes
* Efficiency and Equity Effects of Taxes and Subsidies
* Optimal Taxation, Incentive Effect of Taxation: Taxation and Saving/Borrowing - Tax Evasion.

**Module-5**

**Sources of Public Revenue**

**Introduction**

Revenues earned by the government are received from sources such as taxes levied on the incomes and wealth accumulation of individuals and corporations and the goods and services produced, exports and imports, non-taxable sources such as government-owned corporation’s incomes, central bank revenue and capital receipts in the form of external loans and debts from international financial institutions. It is used to benefit the country. Governments use the revenue to better develop the country, to fix roads, build homes, fix schools, etc. The money that the government collects pays for the services that are provided for the people.

Governments (Public) need to perform various functions in the field of political, social & economic activities to maximize social and economic welfare. To perform these duties and functions, the government requires a large number of resources. Some regularly collect whereas some irregularly collect. These resources call Public Revenues. Public revenue consists of taxes, revenue from administrative activities like fines, fees, gifts & grants. Revenues are not repayable. Some of them are obtained from the sale of public utilities whereas some are obligatory payments to the government.

**Meaning and Definition of Public Revenue**

The income of the government through all sources calls public income or public revenue. According to Dalton, however, the term “Public Income” has two senses - wide and narrow. In its wider sense, it includes all the incomes or receipts which a public authority may secure during any period. In its narrow sense, however, it includes only those sources of income of the public authority which are ordinarily known as “revenue resources.” To avoid ambiguity, thus, the former is termed “public receipts” and the latter “public revenue.”

As such, receipts from public borrowings (or public debt) and the sale of public assets are mainly excluded from public revenue. For instance, the budget of the Government of India is classified into “revenue” and “capital.” “Heads of Revenue” include the heads of income under the capital budget are termed as “receipts.” Thus, the term “receipts” includes sources of public income that are excluded from “revenue.”

There are both rev­enue receipts and capital receipts. Revenue receipts are derived from taxes of different forms. Capital receipts include primary inter­nal market borrowing and also external loans. However, the bulk of state revenue comes from internal sources. The major point of dis­tinction between the two is that while the former has the receipts or earnings of the people as the source, the later has the public prop­erty as the source.

**Tax Revenue:** Tax is a compulsory payment by the citizens to the government to meet the public expenditure. It is legally imposed by the government on the tax payer and in no case tax payer can refuse to pay taxes to the government.

**Sources of Public Revenue**

The methods of public revenue and its volume have significant impact on production and distribution of wealth and income in the country. It has effects on the nature and volume of economic activities and on employment. In fact, methods of public expenditure and public income as well as of public debt are considered as the powerful instrument of bringing about social-economic changes in the economic life of the country. Hence, the analysis of the methods and their nature is of practical importance to private individuals and public authorities both.

##### **Taxes**

Tax is a compulsory levy imposed on economic units by the government. Taxes are generally divided into direct taxes and indirect taxes. Direct taxes are those which are levied directly on the entity meant to bear the burden. In the case of indirect taxes the tax burden is shifted from where they are initially imposed. In India, Personal Income Tax and Corporate Income Tax are the important direct taxes levied by the central government.

**Characteristics of Tax**

1. A tax is a compulsory payment made to the government. People on whom a tax is imposed must pay the tax. Refusal to pay the tax is a punishable offence
2. There is no quid pro quo between a taxpayer and public authorities. This means that the tax payer cannot claim any specific benefit against the payment of a tax
3. Every tax involves some sacrifice on part of the tax payer
4. A tax is not levied as a fine or penalty for breaking law

##### **Commercial Revenues**

These are the receipts by way of prices paid for government-produced goods and services. Under this group, postal charges, tolls, interest on loans of state financial institutions or nationalized banks, tuition fees of public educational institutions include.

##### **Administrative Revenues**

Under this group, fees, licenses, fines, and special assessments include. Most of these are voluntary and based upon the direct benefits accruing to the payer. They generally arise as a by-product of the administrative or control function of the government.

**Fees**

Fees are charged by the government or public authorities for rendering a service to the beneficiaries. To quote Seligman, “A fee is a payment to defray the cost of each recurring service undertaken by the government, primarily in the public interest, but conferring a measurable advantage to the payer.”

Court fees, passport fees, etc., fall under this category. Similarly, licence fees are charged to confer a permission for something by the controlling authority, e.g., driving licence fee, import licence fee, liquor permit fee, etc. Fees are to be paid by those who receive some special advantages. Generally the amount of the fee depends upon the cost of services rendered.

Fees are a bye-product of the administrative activities of the government and not a payment for a business. Thus, fees are distinct from prices. Prices are always voluntary payments, but fees are compulsory contributions, though both are made for special services. Sometimes a fee contains an element of tax when it is charged high in order to bring revenue to the exchequer e.g., a licence fee.

**Fines and Penalties**

Fines and penalties are levied and collected from offenders of laws as punishment. Here the main object of these levies is not so much to earn an income as to prevent the commission of offences and infringement of laws of the country. Fines and penalties are arbitrarily determined and have no relation to the cost of administration or activities of the government. Hence, collections from such levies are insignificant as a source of public revenue.

**Special Assessments**

“A special assessment,” as Seligman points out, “is a compulsory contribution levied in proportion to the social benefits derived to defray the cost of a specific improvement to property undertaken in the public interest.” That is to say, sometimes when the government undertakes certain types of public improvements such as construction of roads, provision of drainage, street lighting etc., it may confer a special benefit to those possessing properties nearby.

As a result, values of rents of these properties may rise. The government, therefore, may impose some special levy to recover a part of the expenses so incurred. Such special assessment is levied generally in proportion to the increase in the value of the properties involved. In this respect, it differs from a tax. In India, these special assessments are referred to as “betterment levy.” Betterment levy is imposed on land when its value is enhanced by the construction of social overhead capital such as roads, drainage, street- lighting, etc. by the public authority in an area.

**Theories of Taxation**

The economists have put forward many ***theories or principles of taxation*** at different times to guide the state as to how justice or equity in taxation can be achieved. The main theories or principles in brief, are:

## (i) Benefit Theory

According to this theory, the state should levy taxes on individuals according to the benefit conferred on them. The more benefits a person derives from the activities of the state, the more he should pay to the government. This principle has been subjected to severe criticism on the following grounds.

**Firstly,** If the state maintains a certain connection between the benefits conferred and the benefits derived. It will be against the basic principle of the tax. A tax, as we know, is compulsory contribution made to the public authorities to meet the expenses of the government and the provisions of general benefit. There is no direct quid *pro quo*in the case of a tax.

**Secondly,** most of the expenditure incurred by the slate is for the general benefit of its citizens, it is not possible to estimate the benefit enjoyed by a particular individual every year.

**Thirdly,** if we apply this principle in practice, then the poor will have to pay the heaviest taxes, because they benefit more from the services of the state. If we get more from the poor by way of taxes, it is against the principle of justice?

## (ii) The Cost of Service Theory:

Some economists were of the opinion that if the state charges actual cost of the service rendered from the people, it will satisfy the idea of equity or justice in taxation. The cost of service principle can no doubt be applied to some extent in those cases where the services are rendered out of prices and are a bit easy to determine, e.g., postal, railway services, supply of electricity, etc., etc. But most of the expenditure incurred by the state cannot be fixed for each individual because it cannot be exactly determined. For instance, how can we measure the cost of service of the police, armed forces, judiciary, etc., to different individuals? Dalton has also rejected this theory on the ground that there s no quid pro qua in a tax.

## (iii) Ability to Pay Theory

The most popular and commonly accepted principle of equity or justice in taxation is that citizens of a country should pay taxes to the government in accordance with their ability to pay. It appears very reasonable and just that taxes should be levied on the basis of the taxable capacity of an individual. For instance, if the taxable capacity of a person A is greater than the person B, the former should be asked to pay more taxes than the latter.

It seems that if the taxes are levied on this principle as stated above, then justice can be achieved. But our difficulties do not end here. The fact is that when we put this theory in practice, our difficulties actually begin. The trouble arises with the definition of ability to pay. The economists are not unanimous as to what should be the exact measure of a person's ability or faculty to pay. The main viewpoints advanced in this connection are as follows:

**(a) Ownership of Property:** Some economists are of the opinion that ownership of the property is a very good basis of measuring one's ability to pay. This idea is out rightly rejected on the ground that if a person earns a large income but does not spend on buying any property, he will then escape taxation. On the other hand, another person earning income buys property; he will be subjected to taxation. Is this not absurd and unjustifiable that a person, earning large income is exempted from taxes and another person with small income is taxed?

**(b) Tax on the Basis of Expenditure:** It is also asserted by some economists that the ability or faculty to pay tax should be judged by the expenditure which a person incurs. The greater the expenditure, the higher should be the tax and *vice*versa. The viewpoint is unsound and unfair in every respect. A person having a large family to support has to spend more than a person having a small family. If we make expenditure as the test of one's ability to pay, the former person who is already burdened with many dependents will have to' pay more taxes than the latter who has a small family. So this is unjustifiable.

**(c) Income as the Basics:**Most of the economists are of the opinion that income should be the basis of measuring a man's ability to pay. It appears very just and fair that if the income of a person is greater than that of another, the former should be asked to pay more towards the support of the government than the latter. That is why in the modern tax system of the countries of the world, income has been accepted as the best test for measuring the ability to pay of a person.

## Proportionate Principle

In order to satisfy the idea of justice in taxation, **J. S. Mill** and some other classical economists have suggested the ***principle of proportionate in taxation*.** These economists were of the opinion that if taxes are levied in proportion to the incomes of the individuals, it will extract equal sacrifice. The modern economists, however, differ with this view. They assert that when income increases, the marginal utility of income decreases. The equality of sacrifice can only be achieved if the persons with high incomes are taxed at higher rates and those with low income at lower rates. They favor progressive system of taxation, in all modern tax systems.

**Principles of Taxation**

Taxesare compulsory payments associated with certain activities. Revenues collected through taxation are used to purchase the inputs necessary to produce government-supplied goods and services or to redistribute purchasing power among citizens.

Taxation reallocates resources from private to government use in two distinct steps. First, the ability of individuals to command resources are reduced, because taxation reduces income for spending on market goods and services. Second, the revenues collected by government then are used to bid for resources necessary to provide government goods and services and to provide income support payments to recipients of government transfers such as Social Security pensions. For example, a family whose annual income is $70,000 and who pays $14,000 in taxes must necessarily curtail either annual consumption or saving. The $14,000 could have been used to purchase home furnishings or to help finance private investment. The private goods and services that could have been bought with the $14,000 is the opportunity cost of government-supplied goods and services for this particular family.

Under tax financing, resources released and made available to government as a result of taxes do not always correspond to resources required to produce the politically chosen government-provided goods and services. In such cases, government demands on resources, coupled with the reduction in private demands caused by the taxes themselves, cause the relative prices of some inputs to change. For example, if taxation results in a reduction in the demand for blue-collar workers while government spending increases the demand for white-collar workers, the net effect will be an increase in the wages of white-collar workers relative to those of blue-collar workers if full employment is to be maintained.

A single-step alternative to taxation is the use of government power to acquire resources directly. The most common example of this is the military draft. When resources are acquired directly, their owners bear the cost of finance by losing the opportunity to use them in the way that maximizes their income or satisfaction.

**Canon of Equity**

This canon of equity implies that the criterion of payment of taxes should be the ability to pay and the sacrifice caused by taxation should be equal for everybody. According to this canon tax system should be based on the principle of social justice. Since it stresses on the payment of tax according to the capacity of the tax-payer to pay tax, it is in favour of progressive tax-structure.

**Canon of Certainty**

This canon implies that tax payer should be certain about the quantum of tax to be paid. Tax rates should be certain, items of taxation be precisely defined; and no discretionary power be left to the tax collecting officials because uncertainty of any kind may result in fraud and corruption. Certainty in taxation also means that a government should be able to estimate the probable yield of a tax with a certain degree of accuracy, so that helps for better administration.

**Canon of Economy**

Economy principle implies that the cost of collection of tax should be kept as low as possible. A major portion of tax revenue consumed in collecting the tax will reduce the net revenue yield of the government from tax and the tax wouldn’t be economical. Economical taxes promote economic efficiency.

**Canon of Convenience**

This canon implies that the time and mode of payment of a tax should be such as to cause the minimum inconvenience to the tax-payer. Adam Smith says, “Every tax ought to be levied at the time and in a manner in which it is most likely to be convenient for the contributors to pay it”

Adam Smith’s canons of Taxation are as sound today as they were in 1776. There have only been extension and modifications of these canons by the economists due to the change in objectives of taxation policy.

**Tax Base**

The tax baseis the item or economic activity on which the tax is levied. The most commonly used tax bases can be grouped into three broad categories: income, consumption, and wealth. These are economic bases; their values depend on decisions made by individuals. For example, individuals make daily choices that affect their income. They also can control the allocation of their income between saving and consumption. Because most individuals must save to accumulate wealth, their decisions regarding consumption also affect their wealth.

A person’s income is the sum of the value of his annual consumption of goods and services and annual saving. Income is often regarded as a good index of the ability to pay taxes. Total annual income in a nation is equal to the value of the total consumption and saving of all people and organizations in the country. A person’s annual consumption is his annual income less the amount of that income saved that year. Finally, wealth represents the value of a person’s accumulated savings and investments at any point in time. The annual flow of income from the stock of accumulated wealth in a nation is the annual return to saving.

The three major tax bases are related. Consumption is the portion of income that is not saved, while wealth is the net value of a person’s stock of accumulated savings or investments.

Because income is believed to be a good index of the ability to pay taxes, many economists use this broad economic base as a benchmark for evaluating the fairness of taxes. The amount of taxes paid is generally computed as a percentage of annual income. The way a particular tax varies as a percentage of income per year is often used to make judgments about the fairness of the distribution of taxes among taxpayers.

Taxes on economic bases can be general or selective. A general taxis one that taxes all of the components of the economic base, with no exclusions, exemptions, or deductions from the tax base. For example, a general income tax would tax all sources of income and would not allow any sort of deduction from total income in computing tax liability. All income, irrespective of its source or use, would be taxable. Similarly, a general wealth tax would tax all forms of holding wealth.

A selective taxis one that taxes only certain portions of the tax base, or it might allow exemptions and deductions from the general tax base. For example, an **excise tax** is a tax on the manufacture or sale of a particular good or service. Excise taxes are selective taxes on production or sales. Similarly, a tax on real estate is an example of a selective tax on a particular form of wealth. A tax on profits is a selective income tax, because it taxes only a particular form of income.

**Tax Rate Structure**

The tax rate structure describes the relationship between the tax collected during a given accounting period and the tax base. In evaluating taxes on such economic bases as income, the tax rates are calculated as the ratio of taxes paid to the various values of the base. The average tax rate (ATR)is simply the total dollar amount of taxes collected divided by the dollar value of the taxable base:

ATR

The marginal tax rate (MTR)is the additional tax collected on additional dollar value of the tax base as the tax base increases:

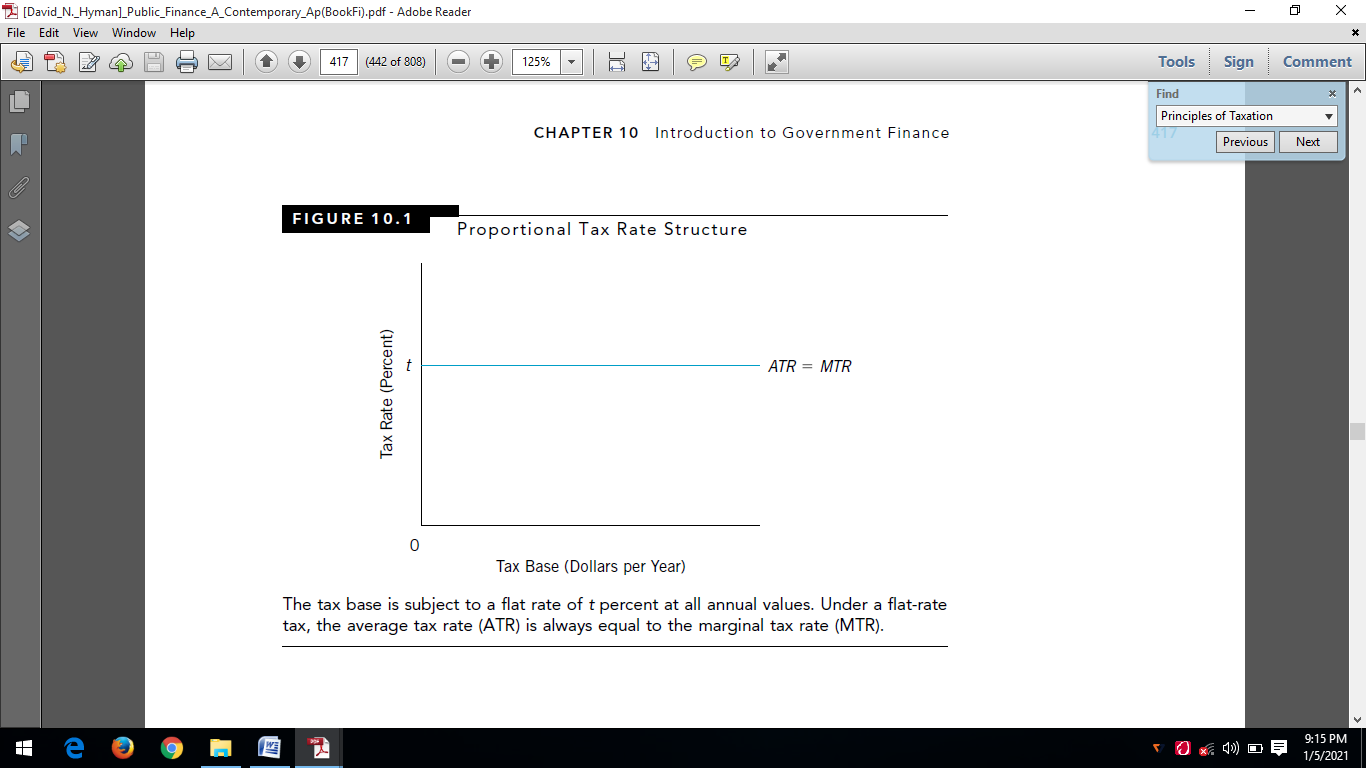
MTR

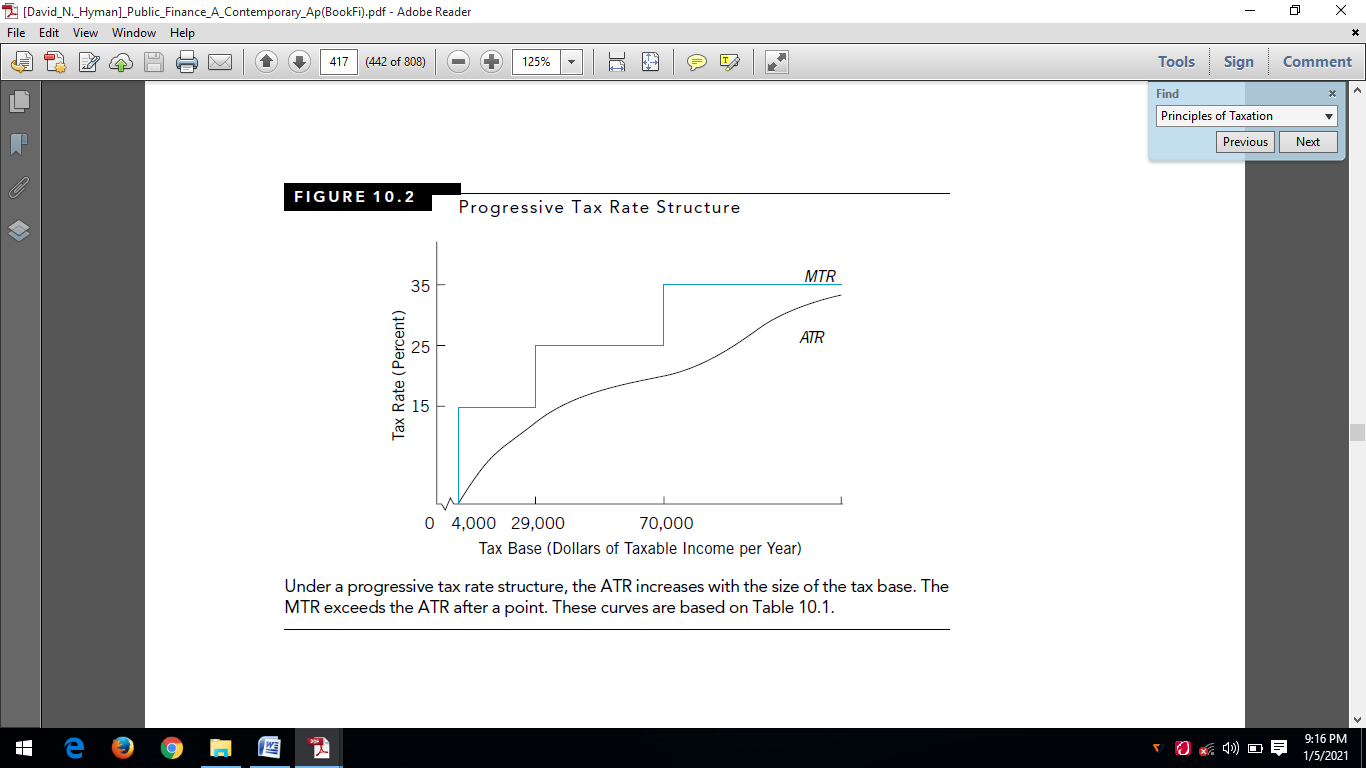
A proportional tax rate structureis one for which the ATR, expressed as a percentage of the value of the tax base, does not vary with the value of the tax base. For example, an income tax of 20 percent would tax all income at 20 percent. Thus, a person with an income of $10,000 and a person with an income of $100,000 would each be subject to the same rate of taxation. The tax on $10,000 at 20 percent would be $2,000, and the tax on $100,000 of income at 20 percent would be $20,000. Under proportional taxation, the ATR, but not the amount of tax, is independent of the size of the base. A tax with a proportional rate structure is sometimes called a flat-rate tax.

For a proportional tax rate structure, both the average and marginal rates of taxation are the same. Because the rate of taxation does not vary with the annual value of the base, additional increments in the tax base, such as additional earnings under an income tax, are taxed at the same rate as that applied to previous values. This is illustrated in Figure 10.1.

When a progressive tax rate structure is used, the ATR increases with the size of the base. The larger the tax base, the larger the ATR applied. The tax bracketgives the increment of annual income associated with each MTR. The MTRs and associated tax brackets for a progressive income tax are illustrated in Figure 10.2.

For progressive taxation, the marginal rate of taxation eventually exceeds the average rate of taxation as the MTR increases. The dichotomy between the two rates is important, because the MTR is more crucial in determining behavior changes that can cause losses in efficiency than is the average rate. Therefore, when the average and marginal rates of taxation vary from each other, it is necessary to carefully delineate the two in order to ascertain properly the effect of the tax on individual behavior. For example, if a person is deciding to work more hours, the net gain for doing so would be the net income she can keep after taxes. If her income is subject to a 50 percent MTR, she will be able to retain only half of her extra income. However, because only income after a certain amount is subject to the 50 percent rate, the person’s ATR will be lower than 50 percent. The difference between average and marginal rates of taxation for a typical progressive tax is illustrated in Figure 10.2.





An Example of a Progressive Tax Rate Structure

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **AVERAGE TAX RATES (ATR)** | |
| Tax Brackets  (Taxable Income) | Marginal Tax Rates  (MTR) | Beginning of Bracket | End of Bracket |
| 0–$ 4,000 | 0 | 0 | 0 |
| $ 4,000–$29,000 | 15 | 0 | 0 |
| $29,000–$70,000 | 25 | 13 | 20 |
| Above $70,000 | 35 | 20 | 34 |

Table 10.1 shows the marginal and average tax rates on which the graph in Figure 10.2 is based. All income up to $4,000 per year is subject to a zero marginal and average tax rate. This is the first tax bracket. Income between $4,000 and $29,000 per year is subject to a 15 percent MTR. Income between $29,000 and $70,000 per year is subject to a 25 percent rate. Finally, all income greater than $70,000 per year is subject to a 35 percent MTR. These are the MTRs for each *bracket* of income.

Table 10.1 shows the ATRs for income at the beginning and end of each tax bracket. For example, a taxpayer with a $4,000 annual income would pay a zero ATR, because only income greater than $4,000 would be taxable. A taxpayer with income at the end of that bracket would pay 15 percent on the amount of income greater than $4,000. This will be 15 percent of $25,000, which is $3,750 per year. Dividing this by that taxpayer’s $29,000 annual income gives an ATR of 13 percent, which is less than the 15 percent MTR.

In each tax bracket, the ATR would steadily rise. Thus, a taxpayer just entering the $29,000 to $70,000 bracket would be paying an ATR of slightly more than 13 percent. A taxpayer with a $70,000 annual income pays nothing on the first $4,000 of income, 15 percent on all income from $4,000 to $29,000, and 25 percent on income greater than $29,000 up to $70,000 per year. The total tax is $3,750 0.25 ($70,000 $29,000) $14,000. The ATR for a taxpayer with $70,000 annual income would be 20 percent. For the final tax bracket, which is open-ended, the table shows the ATR for a taxpayer with $1,000,000 annual income. The ATR for taxpayers with higher annual income would rise steadily and approach, but never equal, the MTR. In Figure 10.2, a line is traced through the corresponding points on the ATRs within brackets to show how ATRs vary. Notice that the ATR is always less than the MTR at all levels of income.

Finally, taxes may have a regressive tax rate structurein which the ATR declines as the size of the tax base increases. In a regressive tax rate structure, the MTR is less than the ATR for all those brackets above the lowest. A regressive income tax results in a lower annual ATR as income rises. More productive individuals would be rewarded with lower tax rates as they produced and earned more. However, the opposition to such a method of taxation is strong because it violates the widely held belief that ability to pay increases with income.

**Efficiency and Equity**

Government finance often has significant and complicated effects on the private choices made by citizens. Taxes can affect the willingness of individuals to produce and invest. User charges affect the levels of consumption of those goods and services on which they are levied, with subsidiary effects on the consumption of substitutes for and complements to government-supplied goods and services. The use of debt finance can affect the market equilibrium rate of interest and the willingness of investors to make private investments.

Because the main function of government finance is to reallocate resources away from private use and toward government use, government must reduce private consumption and investment to accomplish its objective. The main concern in evaluating the efficiency of proposed taxes and methods of finance is the impact of any financial scheme on the total income and wealth available. Two alternative methods of financing a given dollar amount of government-provided goods and services can result in different levels of national income and well-being. The most efficient means of government finance raises that given level of revenue while at the same time it minimizes the loss in well-being from market production and exchange.

The goals of efficiency and equity in the distribution of taxes among citizens are likely to conflict. Methods of government finance that minimize losses in efficiency in markets are not always considered desirable by all citizens. Those who subscribe to the ability-to-pay approach, or who believe that the system of government finance should be used to redistribute income, often oppose taxes that involve minimal losses in efficiency on the grounds that the distributive effects are undesirable. For example, strong support for progressive income taxes exists in industrial nations mainly because many citizens believe that a progressive tax rate structure applied to income correlates taxes with the ability to pay.

The trade-off between an equitable and an efficient system of government finance must be resolved through political interaction. In reality, under a system of compulsory finance, such as taxation, the resulting structure of government finance likely will be neither efficient nor equitable from the point of view of all citizens. In particular, unless a general consensus exists on what is a fair and equitable distribution of taxes among taxpayers, a given system of finance will be unlikely to satisfy all citizens.

For most democratic nations, the tax systems that tend to emerge are full of exemptions and deductions that grant special favors to particular groups for a variety of reasons. Many economists have argued that tax systems should be as efficient as possible and that the questions of income redistribution should be treated separately through a system of transfers independent of the tax system.

Equity remains a subjective concept, and the economist’s judgments are no better than anybody else’s. The economist, however, can generate information on how taxes affect the distribution of income in a community. Quite often, taxes have rather subtle effects on relative prices that might not be immediately obvious to citizens when they are considering the impact of a proposed tax. The economist’s estimates of effects that alternative taxes have on relative prices, incomes, and efficiency are useful for citizens in evaluating any particular tax in relation to their own concepts of equity or fairness. Such estimates permit more-informed collective choices by participating citizens.

**Benefit and Ability to Pay Approaches**

The benefit principleargues that the means of financing government-supplied goods and services should be linked to the benefits that citizens receive from government. From the point of view of those who favor the benefit approach, fees and charges are ideal forms of government finance. Charges, like prices, distribute the costs of goods and services among those who consume them.

A major advantage of the benefit approach is that, if successfully implemented, it links the cost per unit of government-provided services with the marginal benefits of those services. A distribution of tax shares per unit of a pure public good that reflects marginal benefits received by taxpayers induces individual citizens to vote for the efficient output of that good. Taxing all citizens according to their marginal benefits results in a Lindahl equilibrium, provided that the free-rider problem does not exist.

Most government-provided goods and services result in collectively consumed benefits that are difficult to assign to individuals. The only way to determine such benefits would be to ask individual citizens how many extra units of the good or services are worth to them. If individuals know that their share of the financial burden depends on their declaration of benefits, they might have little or no incentive to declare their true benefits. Only in communities that are fairly small, where individuals know each other’s tastes, can a voluntary benefit approach work easily and without compulsion.

In some cases, the benefits from government-provided services can be correlated with a particular economic activity, which is taxed so that the amount paid varies according to benefits received by taxpayers. For example, the linking of gasoline taxes and road construction can be thought of as an attempt to apply the benefit principle by earmarking a particular tax for a particular use. The presumption behind the use of the gasoline tax to finance roads is that the benefits of road use vary directly with the consumption of gasoline. Most user charges, such as tolls for road and bridge use, fares for use of public transport, and admission fees for use of recreational and cultural facilities, are based on the benefit principle.

**Ability-to-Pay Principle**

The ability-to-pay principlemaintains that taxes should be distributed according to the capacity of taxpayers to pay them. Citizens with greater ability to earn income, for example, should be taxed more heavily than those with less capacity to earn. Using this approach, the problem of distributing tax shares is viewed as independent of individual marginal benefits received from government activities. The implementation of a tax system based on the ability to pay requires some collective agreement concerning an equitable distribution of the taxes among citizens. Individual evaluations of the ability to pay are likely to differ among citizens whose preferences differ. In the United States, general consensus holds that the ability to pay varies with income.

Related to the ability-to-pay principle are the notions of horizontal equity and vertical equity. Horizontal equity is achieved when individuals of the same economic capacity (measured, for example, by income) pay the same amount of taxes per year (or over their lifetimes). Vertical equity is accomplished when individuals of differing economic ability pay annual tax bills that differ according to some collectively chosen notion of fairness. Both these concepts are subjective and are difficult to administer. Insofar as individual assessments of economic capacity differ, no consensus concerning horizontal equity is likely and vertical equity requires judgments on income distribution that are even more subjective than those associated with horizontal equity.

**Theory of Optional Taxation**

In the basic framework of optimal commodity taxation, the government seeks to raise a given amount of resources with the levy of only commodity (including both goods and factors) taxes. The objective of the government is to find out, what set of commodity taxes would minimise the efficiency cost of the tax burden to raise a required amount of revenue. The simplest version of the Ramsey model is a static model (i.e., one period model without saving) with a representative consumer.

**Ramsey Rule**

Ramsey rule (1927) requires that the optimal set of commodity taxes leads to an equal percentage reduction in the compensated demands for all goods and factors. Recall that compensated demand for a good is derived by keeping utility constant consequent upon a price change and assessing how demand changes with a change in the relative price only. Compensated demand therefore captures only one component of price effect, i.e., the substitution effect as the concern of the theory of optimal taxation pertains to excess burden. By way of clarification, since optimality pertains to allocation in terms of quantities, Ramsey rule demands “equal-percentage change” in the quantities of each good (or factor) rather than equal percentage change in the prices as implied by uniform taxation.

Ramsey (1927) showed that a uniform commodity tax system, which does not change the relative prices, is, in fact, rarely optimal. It may appear that taxing goods and services at a uniform rate would be optimal, as relative prices remain unchanged. However, this is just a tax on income as real incomes falls with the rise in nominal price level on account of a rise in prices of all goods and services rise by the same magnitude. Uniform set of taxes may therefore appeal to the policy makers apparently because relative prices remain unchanged and optimal decisions are satisfied. But ultimately it is the price induced change in demand which matters. So, imposing a uniform rate of tax on a good whose compensated demand is relatively elastic would generate less revenue as well as greater inefficiency as demand changes relatively more.

**Tax Policy Analysis**

Tax policy analysis seeks to identify the impact of tax policy options on individuals, households, businesses, and economic growth and development, so that government decision-makers and the public can make informed policy decisions. Gender analysis of tax policy seeks to identify the differential impact on women and men of tax alternatives, to the extent that their social and economic roles and responsibilities are different, in order to ensure gender equity. In developing countries, most people and especially most women are poor, so the analysis of both income and gender equity is central to tax policy analysis.

**Classification of Taxes**

In the literature of public finance, taxes have been classified in various ways according to who pays for them, who bears the ultimate burden of them, the extent to which the burden can be shifted, and various other criteria. Taxes are most commonly classified as either direct or indirect, an example of the former type being the income tax and of the latter the sales tax. There is much disagreement among economists as to the criteria for distinguishing between direct and indirect taxes, and it is unclear into which category certain taxes, such as corporate income tax or property tax, should fall. It is usually said that a direct tax is one that cannot be shifted by the taxpayer to someone else, whereas an indirect tax can be.

**Direct and Indirect Taxes**

The distinction between direct and indirect taxes is based on whether or not the burden of a tax can be shifted wholly or partly to others. If a tax is such that its burden cannot be shifted to others and the person who pays it to the Government has also to bear it, it is called a direct tax. Income tax, annual wealth tax, capital gains tax are examples of direct taxes. In case of a direct tax there is a direct contact between the tax payer and tax levying public authority.

On the other hand, indirect taxes are those whose burden can be shifted to others so that those who pay these taxes to the Government do not bear the whole burden but pass it on wholly or partly to others. For instance, excise duty on the production of sugar is an indirect tax because the manufactures of sugar include the excise duty in the price and pass it on to buyers. Ultimately, it is the consumers on whom the incidence of excise duty on sugar falls as they will pay higher price for sugar than before the imposition of the tax.

Thus, though excise duties are on the production of commodities but they can be shifted to the consumers. Likewise, sales tax on commodities can also be passed on to buyers or consumers in the form of higher prices charged for the commodities. Therefore, excise duties and sales taxes on commodities are examples of indirect taxes. They are also known as commodity taxes. In the case of indirect taxes, there is an indirect relation, between the Government and those who ultimately bear the burden of the taxes.

**Specific and Ad-Valorem Taxes**

Indirect taxes can be either specific or ad-valorem. A specific tax on a commodity is a tax per unit of the commodity, whatever its price. Thus the amount of total specific tax will vary in accordance with the changes in total output or sales of the commodity and not with the total value of output or sales.

On the other hand, an ad-valorem type of an indirect tax is levied according to the value of the commodity. For instance, sales tax in India is an ad-valorem tax as the rate of sales tax in case of several commodities is 10 per cent of the value of sales of the commodities. Ad-valorem taxes are progressive in their burden on consumers whereas specific taxes are regressive.

**Progressive, Proportional and Regressive Taxes**

According to another classification, taxes can be progressive, proportional or regressive. In case of proportional tax, the same rate of the tax is charged, whatever be the magnitude of the base on which it is levied. For instance, if rate of income tax is 25 per cent whatever the size of income of a person, it will then be a proportional income tax. Likewise, if rate of wealth tax is 5 per cent, it will be proportional wealth tax.

A regressive tax is the opposite of a progressive tax. In case of a regressive income tax, the rate is lowered as the income rises. Thus, under regressive tax system, the burden of the tax is relatively more on the poor than on the rich. A regressive tax is therefore inequitable and no civilized Government in the world today will levy such a tax.

**Income Tax**

Income Act is also called the IT Act, 1961. Income Tax in India (income-tax) is governed by the rules set by this act. The income taxed by this act can be generated from any source such as profits received from salaries and investments, owning a property or a house, a business, etc. The IT Act defines the tax benefit you can avail on a life insurance premium or a fixed deposit. It also decides the savings from your income via investments and the tax slab for your income tax.

Income Tax is one of the most popular and least implicit taxes. It is such a tax, which is imposed on your income in a fiscal year. There are a lot of facets to the income tax, like taxable income, reduction of the taxable income, tax slabs, tax deducted at source (TDS), etc. This tax is pertinent to both the companies and individuals. For individuals, the amount they pay against the tax is based on the tax bracket they breeze in. This slab or tax decides the tax that an individual has to pay depending upon their annual income and spreading from no tax to 30 percent for the higher income groups.

The government of India has fixed various tax slabs for different groups of people, namely very senior citizens (people who have attained an age above 80 years), senior citizens (people who have attained an age of 60 to 80 years), and general taxpayers.

**Corporation Income Tax**

The tax imposed on corporation profit may be dived into two categories corporate income tax and taxes on excess profit. There is a contractory view on shifting of corporation tax. According to tradition view shifting of corporation tax is not possible but modern economist, are not agree to this view Modern economist, argued that corporation tax may be shifted on following grounds:

(i) Taxes on excess profit are imposed in abnormal circumstance like inflation, under this circumstance the demand and price both are high, so the shifting of tax is possible.

(ii) Since the corporation tax is imposed on whole income of corporate sector, in which interest is included. Hence it becomes a part of cost of production in long run, which affects the prices. The increasing prices are helpful to shift the tax but it depends upon elasticity of demand and supply of a commodity.

**Excise Taxes**

The excise duty is defined as the tax levied by the government on the items that are produced within the country of India. The manufacturer of good is legally responsible to pay the taxes to the government of India when the finished products are transferred from the production house to the market. It is moreover called as production or manufacturing tax, since the tax is levied upon an item’s production and the manufacturer has to pay the tax. The end customer who purchases the product is not liable to pay this tax.

Excise Duty is an indirect tax levied on production of goods that are manufactured and produced within India. This type of tax is very importantly levied on manufactured goods within India. Excise Duty is levied on all types of goods, except for certain goods that are exempted. There are three types of Central Excise duties collected by the India Government specifically: Basic Excise Duty, Additional Duty of Excise and Special Excise Duty.

**Sales Tax**

Sales tax is a tax levied upon the end customer who is the final consumer of the product. Usually the MRP of a product consists of two parts one relates to the price of the product and the second related to the product tax. So at any time we make any purchase we pay sales tax as part of the product Maximum Retail Price (MRP). The retailer who sells the concerned product in the market collects this aforementioned amount from the buyer/consumer of the product and deposits the tax portion of the sale to the government.

Sales tax is a tax levied on sale or purchase within the various States of India. Different states charge different sales tax levels, whereas there is a Central Sales Tax (CST) levied on sale or purchase in the line of interstate trade. If the Goods and Services Tax-GST is introduced it would make more efficient most of the taxes including states taxes and excise tax. The Bill is probable to be placed in the winter session of parliament. It is envisaged that this would increase the GDP and streamline taxes in India.

**Property Tax**

Property tax is a tax paid on property owned by an individual or other legal entity, such as a corporation. Most commonly, property tax is a real estate ad-valorem tax, which can be considered a regressive tax. It is calculated by a local government where the property is located and paid by the owner of the property. The tax is usually based on the value of the owned property, including land. However, many jurisdictions also tax tangible personal property, such as cars and boats. The local governing body will use the assessed taxes to fund water and sewer improvements, and provide law enforcement, fire protection, education, road and highway construction, libraries, and other services that benefit the community.﻿ Deeds of reconveyance do not interact with property taxes.

**Wealth Tax**

Wealth tax is a tax based on the market value of owned assets. Although many developed countries choose to tax wealth, the United States has historically favored taxing income. Recently, however, the immense and increasing disparity in wealth in the United States as of 2018 the wealthiest 10% owned 70% of the country’s wealth while the richest 1% owned 32%, according to Federal Reserve Board caused politicians such as Bernie Sanders and Elizabeth Warren to propose a wealth tax in the run-up to the 2020 Presidential election.

**Efficiency and Equity Effects of Taxes and Subsidies**

A big issue in economics is the tradeoff between efficiency and equity.

* **Efficiency** is concerned with the optimal production and allocation of resources given existing factors of production. For example, producing at the lowest cost.
* **Equity** is concerned with how resources are distributed throughout society.

1. Vertical equity is concerned with the relative income and welfare of the whole population e.g. relative poverty when people have less than 50% of average income. Vertical equity is concerned with how equitably resources are distributed and may imply higher tax rates for high-income earners.
2. Horizontal equity is treating everyone in the same situation the same. For example everyone earning Rs. 15,000 should pay the same tax rates.

**Tax Base:** A tax base is a total amount of assets or income that can be taxed by a taxing authority, usually by the government. It is used to calculate tax liabilities. This can be in different forms, including income or property.

**Excess Burdens of Taxes and Subsidies**

In economics, the excess burden of taxation, also known as the deadweight cost or deadweight loss of taxation, is one of the economic losses that society suffers as the result of taxes or subsidies. Economic theory posits that distortions change the amount and type of economic behavior from that which would occur in a free market without the tax. Excess burdens can be measured using the average cost of funds or the marginal cost of funds (MCF). Excess burdens were first discussed by Adam Smith.

**Measures of the excess burden**

The cost of a distortion is usually measured as the amount that would have to be paid to the people affected by its supply, the greater the excess burden. The second is the tax rate: as a general rule, the excess burden of a tax increases with the square of the tax rate.

The average cost of funds is the total cost of distortions divided by the total revenue collected by a government. In contrast, the *marginal* cost of funds (MCF) is the size of the distortion that accompanied the last unit of revenue raised (i.e. the rate of change of distortion with respect to revenue). In most cases, the MCF increases as the amount of tax collected increases.

The standard position in economics is that the costs in a cost-benefit analysis for any tax-funded project should be increased according to the marginal cost of funds, because that is close to the deadweight loss that will be experienced if the project is added to the budget, or to the deadweight loss removed if the project is removed from the budget.

**The Incidence of Taxes:** Tax incidence refers to how the burden of a tax is distributed between firms and consumers (or between employer and employee). The tax incidence depends upon the relative elasticity of demand and supply.

* The consumer burden of a tax increase reflects the amount by which the market price rises.
* The producer burden is the decline in revenue firms face after paying the tax.

The burden of the tax can be transferred to others through a process of shifting. It may be noted that the whole burden of the tax may not be shifted to others. It may be that a part of the tax may be shifted to others and a part be borne by the one who initially pays the tax. As a matter of fact, a part of the tax burden rests on all the persons to a larger or smaller degree in the chain of transferring the burden so that at the ultimate end only a small burden rests. The process of shifting the burden of a tax goes on so long as different persons who come in the chain are able to pass on the burden to others till it ultimately rests on a person or a group of persons who cannot shift this unwelcome baby further.

Theory of incidence of tax studies in what proportion the burden or incidence of a tax is shared among different persons. It may be noted that a tax can be shifted through a process of exchange or, in other words, an individual or a firm can shift the burden of the tax if there occurs exchange relations which are conducted on the basis of prices of goods and factors. The person who initially pays the tax can pass it on to the other either in the form of higher prices of goods he sells or in the form of lower prices of factors he buys. Whether shifting can take place or if it does so how much tax burden can be shifted depends on a number of factors.

**Optimal Taxation**

The main objective of optimal taxation principle has been to identify that policy which enables the government to secure revenue for socially worthwhile expenditures with the least sacrifice of economic well being. The goal of optimal income taxation in the utilitarian studies was to make the sum of individuals’ utilities as high as possible, subject to the revenue required. That meant maximization of social welfare.

Edgeworth (1897) examined the optimal income taxation, assuming identical utility functions of individuals which exhibit diminishing marginal utility of income (utility functions being dependent upon the levels of income), fixed total amount of income available and the objective of maximizing the sum of individual-utilities subject to required revenue. The cost of obtaining more equality was taken zero in Edgeworth’s model. Since the system of Equi-marginal sacrifice demanded high marginal rates of tax on high income, the objective was only of ‘equality’ that means the disincentive effects of high marginal rates of tax-people would not be interested in earning high incomes knowing that it would be taken away by the government- were ignored. Therefore, the importance of trade off between equity and efficiency or incentive was realized. Then, the assumptions in Edgeworth’s analysis were also not acceptable. The assumption that the total amount of income available to society is fixed is far from reality and not correct because it means that the tax rates have no effect on the level of production. Further, the utilities of individuals not only depend upon income but upon leisure also.

**Incentive Effect of Taxation**

Taxation on goods, income or wealth influence economic behaviour and the distribution of resources.

* For example, higher taxes on carbon emissions will increase cost for producers, reduce demand and shift demand towards alternatives.
* Higher income tax can enable a redistribution of income within society, but may have an impact on reducing the incentives to work and supply labour.

**Incentive effect:** Higher income tax reduces the take-home pay and can reduce the incentive to work. Either workers chose not to do overtime or even leave the labour market altogether. However, there are two conflicting effects of higher tax.

* *Substitution effect*. Higher tax leads to lower wages and work becomes relatively less attractive than leisure. The substitution effect of a higher tax is that workers will want to work less.
* *Income effect*. However, if higher tax leads to lower wages, then a worker may feel the need to work longer hours to maintain his target level of income. Therefore, the income effect means that higher tax may mean some workers feel the need to work longer.
* This means there is no guarantee of the impact of higher tax it depends whether the substitution effect is greater than the income effect.

**Tax Evasion**

Since tax is a compulsory levy imposed by the government, a good tax structure should ensure that economic agents actually comply with it. For designing such a tax structure some idea about the behaviour of the taxpayers is required. Below we discuss such a model.

One of the basic models on tax evasion is the Allingham-Sandmo model. This model starts with the assumption that economic agents are amoral and risk averse. As you know, according to the expected utility theory, in the case of risky projects the economic agents make their choice on the basis of the weighted sum of the utility values of the outcomes. The probability of the outcome is used as the weight. In this case, since tax evasion is a risky venture, the following expected utility function is used: Max E (U) = (1**–** p). U [YN] + p. U [YC]

i) Where, p is the probability of being caught, ii) YN is the disposable income if the agent is not caught, where YN = Y – t.x.Y, with t as the tax rate and x as the income voluntarily reported by the agent, and iii) YC is the disposable income if the agent is caught, where YC=Y– t.x.Y– (1+ π) (1– x) t.Y, π is the penalty rate on detected but undeclared income. If the economic agent is caught, it would have to pay the tax on the income that was concealed *plus* a penalty on the tax the agent was trying to evade. In this situation, the economic agent would have incentive to evade taxes if p (1+ ð)(1– x)tY < t.Y i.e., tax due

The left hand side of the inequality shows the marginal cost to the economic agent if it is caught while trying to evade taxes and the right hand side shows the tax liability had the agent reported the actual income. But the assumption that the probability ‘p’ of detection by the tax authorities remains a constant, irrespective of the extent of evasion is not tenable. Generally, given the paucity of resources with the tax administration, especially in terms of manpower, it focuses only on the large evaders. Therefore the probability of detection ‘p’ increases with the extent of evasion.

According to the model, the way to discourage evasion is to raise the probability of being caught ‘p’ by strict enforcement and to raise the penalty π. But stricter monitoring and enforcement would require better administration, so a higher ‘p’ would also imply increase in cost of tax administration. It is more expensive than raising the penalty ‘π’. But, a higher rate of penalty could induce the tax evader to bribe the administration so as to reduce his cost. So, a higher π could actually breed further corruption.

# Module-6

# Government Budgets, Borrowing, Deficit Financing and Fiscal Policy

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* Government Debt: Sources and Burden of Public Debt:
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**Module-6: GOVERNMENT BUDGETS, BORROWING, DEFICIT FINANCING AND FISCAL POLICY**

**Introduction**

Government accounting refers to the process of recording and the management of all financial transactions incurred by the government which includes its income and expenditures. The financial management of any organization must have a prudent financial system backed by sound and effective accounting procedures and internal controls. A well-designed and well managed accounting system helps ensure proper control over funds. Accounting policies and procedures are designed to compile accounts fulfilling legal/procedural requirements that govern financial control. Accounts are an integral part of financial management of activities. On the basis of accounts, the Government determines the shape of its monetary and fiscal policies.

**Government Accounting**

The accounts of Government are kept in three parts

1. Consolidated Fund of India
2. Contingency Fund of India and
3. Public Account

**Consolidated Fund of India**

All revenues received by the Government by way of taxes like Income Tax, Central Excise, Customs and other receipts flowing to the Government in connection with the conduct of Government business i.e. Non-Tax Revenues are credited into the Consolidated Fund constituted under Article 266 (1) of the Constitution of India. Similarly, all loans raised by the Government by issue of Public notifications, treasury bills (internal debt) and loans obtained from foreign governments and international institutions (external debt) are credited into this fund. All expenditure of the government is incurred from this fund and no amount can be withdrawn from the Fund without authorization from the Parliament.

**Contingency Fund of India**

Art 267(I) of the constitution provides that "Parliament may by law establish a Contingency Fund in the nature of an imprest to be entitled the Contingency Fund of India into which shall be paid from time to time such sums as may be determined by such law, and the said Fund shall be placed at the disposal of the President to enable advances to be made by him out of such Fund for the purposes of meeting unforeseen expenditure pending authorisation of such expenditure by Parliament by law under Article 115 or Article 116".

**Public Account**

In the Public Account constituted under Article 266 (2) of the Constitution, the transactions relate to debt other than those included in the Consolidated Fund of India. The transactions under Debt, Deposits and Advances in this part are those in respect of which Government incurs a liability to repay the money received or has a claim to recover the amounts paid. The transactions relating to ‘Remittance’ and ‘Suspense’ shall embrace all adjusting heads. The initial debits or credits to these heads will be cleared eventually by corresponding receipts or payments. The receipts under Public Account do not constitute normal receipts of Government. Parliamentary authorization for payments from the Public Account is therefore not required.

**Budgets and Budget Processes**

A budget is an estimation of revenue and expenses over a specified future period of time and is usually compiled and re-evaluated on a periodic basis. Budgets can be made for a person, a group of people, a business, a government, or just about anything else that makes and spends money.

Budgeting is a process whereby future income and expenditure are decided in order to streamline the expenditure process. Budgeting is done in order to keep track of the expenditures and income. It serves as a monitoring and controlling method in order to manage the finances of a business. It begins by deciding upon the financial goals according to which the budget will be made. Other important activities in the budgeting process include things such as forecasting, monitoring, controlling and evaluating the financial goals.

Budgeting process is very crucial for any business entity. Without a proper budget, a business can never keep track of how much it has earned and how much it has spent. Budget serves a great guide by which a business can oversee its income stream and can identify potential dangers to it beforehand. Furthermore, budget acts as a valuable tool in order to take control of how a business spends.

The budgetary process under the Constitution follows the procedure laid down in *Articles 112 to 117.* The budget shows receipts and payments under three parts in which government accounts are kept; these are Consolidated Fund, Contingency Fund and Public Account. The budget comprises Revenue Budget and Capital Budget. The budget estimates of expenditure which are to be voted by the Lok Sabha are submitted in the form of Demands for Grants. Generally, one Demand for Grant is presented in respect of each ministry or department.

In order to allow time for the executive and legislative processes to go through, budgeting is geared to a cycle. The process of approval is very significant in a responsible form of government. The cycle consists of four phases:

1. Preparation and submission
2. Approval
3. Execution
4. Audit

At any given point of time, several cycles would be in operation and would be overlapping. Nevertheless, various segments of a cycle have different operational life.

**Budget Preparation**

In India, budget preparation formally begins on the receipt of a circular from the Ministry of Finance sometime during September/October, that is, about six months before the budget presentation. The circular prescribes the time-schedule for sending final estimates separately for plan and non-plan, and the guidelines to be followed in the examination of budget estimates to be prepared by the department concerned. The general rule is that the person who spends money should also prepare the budget estimates. Budget proposals normally contain the following information.

i) Accounts classification

ii) Budget estimates of the current year

iii) Revised estimates of the current year

iv) Actuals for the previous year

v) Proposed estimates for the next financial year (which is the budget proper). Budget estimates normally involve

a) Standing charges or committed expenditure on the existing level of service. This can easily be provided for in the budget, as it is more or less based on a projection of the existing trends.

b) New expenditure which may be due to:

i) Expansion of programmes involving expenditure in addition to an existing service or facility

ii) New service for which provision has not been previously included in the grants.

While *b) (i)* can be estimated with reference to progress made and the likely expenditure during the next financial year, budget provision for *(b) (i)* and *(ii)* cannot be made unless the scheme relating to it is finally approved.

The budget estimates prepared by the ministries/departments according to budget and accounts classification are scrutinized by the Financial Advisors concerned. The plan items of the Central Budget are finalized in consultation with the Planning Commission and are based on the Annual Plan.

**Parliamentary Approval**

The estimates of expenditure prepared by ministries/departments are transmitted to the Ministry of Finance by December where these are scrutinized, modified where necessary and consolidated. The estimates of revenue are also prepared by the Finance Ministry and thus the budget is finalized. The budget is presented to the Parliament generally on the last working day of February. In the first stage, there is a general discussion on the broad economic and fiscal policies of the government as reflected in the budget and the Finance Minister's speech. This lasts about 20-25 hours.

In the second stage, there is a detailed discussion on the demands for grants, usually in respect of specific ministries or departments. Each demand for grant is voted separately. At this stage members of parliament may move motions of various kinds. Generally these are policy cuts, economy cuts, and token cuts. The policy cut motion seeks to reduce the demand to rupee one and is indicative of the disapproval of general or specific policy underlying the service to which the demand pertains. The motion for economy cut is to reduce the proposed expenditure by a specified amount. A token cut in a demand is moved to reduce it by a nominal amount say Rs. 100 and may be used as an occasion to ventilate a specific grievance. Since it is never possible to accommodate a detailed discussion on each demand for grant separately, the demands that cannot be so discussed are clubbed together and put to the vote of the Parliament at the end of the period allotted for discussion.

Though the budget is presented before both Houses of Parliament, the demands for grants are submitted only to the lower house. Demands for grants, are the executive's requisitions for sanction to spend, and only the lower house can have a say in the matter. While the legislature can object to a demand for grant, reject it or reduce it, it cannot increase the same. It may also be mentioned here that since no demand for a grant can be made except on the recommendations of the President or the Governor (in the case of State), private members cannot propose any fresh items of expenditure. If this were allowed it would necessitate revision of receipts and consequently the budget and sometimes may lead to improper appropriation of public funds.

Even after the demands for grants have been voted by the Parliament, the executive cannot draw the money and spend it. According to the Constitutional provisions, after the demands for grants are voted by the Lok Sabha, Parliament's approval to the withdrawal from the Consolidated Fund of the amount so voted and of the amount required to meet the expenditure charged on the Consolidated Fund is sought through the Appropriation Bill. The Appropriation Bill after it receives the assent of the President becomes the Appropriation Act. Thus, without the enactment of an Appropriation Act, no amount can be withdrawn from the Consolidated Fund.

Since the financial year of the government is from 1st April to 31st March, it follows that no expenditure can be incurred by the government after 31st March unless the Appropriation Act has heen passed by the close of the financial year. This is generally not possible as the process of discussion of the budget usually goes on up to the end of April or the first week of May. Thus, in order to enable the government to carry on its normal activities from 1st April till such time as the Appropriation Bill is enacted, a Vote on Account is obtained from Parliament through an Appropriation (Vote on Account) Bill.

The proposals of government for levy of new taxes, modification of the existing tax structure or continuance of the existing tax structure beyond the period approved by Parliament are submitted to Parliament through the Finance Bill. The members can utilize the occasion of discussion on the Finance Bill to criticize government policies, more specifically the proposals regarding the taxation and tax laws. In certain cases, taxation proposals take effect immediately. Since, however, passing of the Finance Bill may entail a time lag, a mechanism under which the taxation proposals take effect immediately pending the passing of the Finance Bill exists in the form of Provisional Collection of Tax Act, 1931, which empowers the government to collect taxes for a period of 75 days till the Finance Bill is passed and comes into effect.

The budget of the Central Government is not merely a statement of receipts and expenditure. Since Independence, with the launching of five year plans, it has also become a significant statement of government policy. The budget reflects and shapes, and is in turn shaped by, the country's economic life. A background of the economic trends in the country during the current year enables a better appreciation of the mobilization of resources and their allocation as reflected in the budget. A document, Economic Survey, is prepared by the government and circulated to the members of Parliament a couple of days before the budget is presented. The Survey analyses the trends in agricultural and industrial production, money supply, prices, imports and exports and other relevant economic factors having a bearing on the budget.

**Execution of the budget**

The execution of the budget is the responsibility of the executive government. The procedures for execution of the budget depend on the distribution and delegation of powers to the various operating levels. As soon as the Appropriation Act is passed, the Ministry of Finance advises spending Ministries/ Departments about their respective allocation of funds. The controlling officers in each ministry department then allocate and advise the various disbursing officers. The expenditure is monitored to ensure that the amounts placed at the disposal of the spending authorities are not exceeded without additional funds being obtained in time.

**Audit**

The executive spends public funds as authorized by the legislature. In order to ensure accountability of the executive to the legislature, public expenditure has to be audited by an independent agency. The Constitution provides for the position of the Comptroller and Auditor General of India to perform this function. It is his/ her duty to ensure that the funds allocated to various agencies of the government have been made available in accordance with law; that the expenditure incurred has the sanction of the competent authority; that rules, orders & procedures governing such expenditure have been duly observed; that value for money spent has been obtained and that records of all such transactions are maintained, compiled and submitted to the competent authority. This is the last stage in completing the budgetary process.

**Federal/Government Deficit**

A deficit is an amount by which the expenditures in a budget exceed the income. A Government Deficit is the amount of money in the set budget by which the government expenditure exceeds the government income amount. This deficit provides an indication of the financial health of the economy. To reduce the deficit or the gap between the expenditures and income, the government may cut back on certain expenditures and also increase revenue-generating activities.

**Revenue deficit**

The revenue deficit mentions to the surplus of government’s revenue expenditure over the revenue receipts.

Revenue deficit = Revenue expenditure – Revenue Receipts

This deficit only includes current income and current expenses. A high value of deficit indicates that the government should cut down on its expenditures. The government may increase its revenue receipts by increasing tax income. Disinvestment which means selling off assets is another remedial measure to reduce revenue deficit.

**Fiscal Deficit**

A fiscal deficit is a gap by which government’s total expenditures exceed the government’s total generated revenue. This, however, does not include the government borrowings.

Fiscal deficit = Total expenditure – Total receipts excluding borrowings

Fiscal deficit indicates the amount of money that the government will need to borrow during the financial year. A greater deficit implies more borrowing by the government and the extent of the deficit indicates the amount of expense for which the money is borrowed.

A huge disadvantage or implication of fiscal deficit is it may lead to a debt trap. Also, it may lead to unnecessary and wasteful expenditure by the government. Increased fiscal deficit leads to uncontrolled inflation. Borrowing is one way to reduce fiscal deficit. Another way is deficit financing. Deficit financing refers to the printing of new notes to increase cash flow in the system. The fiscal deficit is a positive outcome if it leads to the creation of assets. It is detrimental to the economic condition of the nation if it is used to simply cover revenue deficit.

**Primary Deficit**

A primary deficit is the amount of money that the government requires to borrow apart from the interest payments on the formerly borrowed loans. We must make a note that the borrowing necessity of the government comprises interest responsibilities on the collected amount of debt. The aim of quantifying the primary deficit is to concentrate on current fiscal imbalances. To attain an approximate of borrowing on account of current expends overreaching revenues; we need to compute what has been known as the primary deficit.

**Gross primary deficit = Gross fiscal deficit – Net interest liabilities**

Net interest liabilities comprise of interest payments – interest receipts by the government on net domestic lending.

**Government debt**

Public debt, sometimes also referred to as government debt, represents the total outstanding debt (bonds and other securities) of a country’s central government. It is often expressed as a ratio of Gross Domestic Product (GDP). Public debt can be raised both externally and internally, where external debt is the debt owed to lenders outside the country and internal debt represents the government’s obligations to domestic lenders. Public debt is an important source of resources for a government to finance public spending and fill holes in the budget. Public debt as a percentage of GDP is usually used as an indicator of the ability of a government to meet its future obligations.

**Sources and Burden of Public Debt**

Burden of public debt is a misleading and highly confused concept. The 1930’s and 1940’s witnessed an array of debate over the issue of debt burden. The focus of debate was between those who feared that the creation of debt in course of deficit finance would burden the future and others who believed that such finance would not do so. Later on two extreme views emerged in this regard. The burden con­troversy attained its logical end in the pronouncement of A.C. Pigou, A.P. Lerner, Alwin. H. Hansen and Prof. P.E. Taylor.

In this context, Prof. Taylor point out that “the nature and severity of the burden have however frequently been improperly understood largely because of the temptation to think of public debt in terms of private debt and to apply identical standards to both”. Every debt has a corresponding credit and this fact is frequently over looked when considering the burden of public debt. In this context, Taylor point out “the liability of the debtor to the creditor is matched by the asset value of the creditors claim.

The borrowings of the government may be from within the country or from outside the country or both. Government debt can be categorized as internal debt, owed to lenders within the country, and external debt, owed to foreign lenders. Thus, there are two major sources of public borrowings: (i) Internal and (ii) External. Internally, the government may borrow from citizens, commercial banks, other financial institutions in the money market and from the central banks. Normally the government of the country has a large variety of debt obligations. Therefore public debt may be defined in several different ways covering their attractive combinations and to suit the purpose of the definitions.

Thus, at one extreme it may include all financial liabilities of a government (including its currency) while at the other extreme, it may include only a few of them. A clear-cut stand has also to be taken regarding inter-governmental obligation like loans from the central government to the states. Similarly, a decision is required as to whether the central bank of the country is to be considered a part of the government or not for the purpose of estimating the volume and composition of public debt. It would be helpful if we have a brief idea of the type of obligations, which the government of a country usually incurs.

Firstly there is the currency itself generally, however the government creates a part of the currency; the rest is created by the central bank of the country. Therefore, the entire currency circulating in the market can be a part of public debt only if the central bank is classified as a part of the government sector. In any case, currency obligation normally remains dormant or inactive and the government does not ‘pay them off’ at the most one set of currency is replaced by another set and that is all.

Secondly other set of obligations of government constitutes it short-term debt; these obligations are normally of maturity of less than one year at the time of issue and consist of items like the treasury bills.

Thirdly some obligations do not have any specific maturity but may be repayable subject to various terms and conditions. They are referred to as floating debt. Examples of this category include provident fund, small saving reserve funds and deposit and so on. In India, the Government of India has also issued certain special securities to meet its obligations towards international institutions like the International Bank for reconstruction and development and the International Monetary Fund. These special securities may be called Special floating debt.

Fourth category of government obligations consists of the permanent or funded debt such loans have as maturity of more than one year at the time of issue. In practice their maturity is usually between three and thirty years. Some of them may even be non-terminable (or perpetuities) so that the government is only to pay the interest on such debt without ever repaying the principal amount.

Fifthly obligations owned to foreigner’s government, institutions, firms and individuals are called external loans. They may have a variety of terms and conditions. Thus, depending upon the purpose and contact, institutional arrangements and so on, different people could define public debt differently. At one extreme all financial obligations of the government including the demand debt (that is currency obligations) are sought to be included in the definition of public debt, while in other cases only some of the above-mentioned categories of obligations are considered. In general, however, the currency obligations of the government are usually excluded from the definition of the public debt and only the floating, funded, external and other obligations are included in it.

External debt(or foreign debt) is that part of the total debt in a country that is owed to creditors outside the country. The debtors can be the government, corporations or private households. The debt includes money owed to private commercial banks, other governments, or international financial institutions such as the IMF and World Bank. IMF defines it as “Gross external debt, at any given time, is the outstanding amount of those actual current, and not contingent, liabilities that require payment(s) of principal and/or interest by the debtor at some point(s) in the future and that are owed to nonresidents by residents of an economy.”

Generally external debt is classified into four heads i.e. (1) public and publicly guaranteed debt, (2) private non-guaranteed credits, (3) central bank deposits, and (4) loans due to the IMF. However the exact treatment varies from country to country. For example, while Egypt maintains this four head classification (2) in India it is classified in seven heads i.e. (a) multilateral, (b) bilateral, (c) IMF loans, (d) Trade Credit, (e) Commercial Borrowings, (f) NRI Deposits, and (g) Rupee Debt.

**Principles of Debt Management and Repayment**

Public debt management refers to a set of operations relating to the magnitude and structure of the debt, distribution of ownership of the debt among banks, non-banks and other institutions, individuals, maturity mix, structure of interest rates, refunding and repayment. In a liberal sense it refers to a set of operations which are necessary to maintain the existing debt at a minimum cost. According to C.C. Abbot “Management of debt is meant the choice of debt forms and the or refund maturing obligations, the refunding terms offered, the treatment given to different classes of debt and different types of bondholders, determination of the provisions attached to new bond issues, adoption of new issues to the needs of prospective holders, policies pursued in the retirement or creation of new debt and the relative weights given to all these matters in the Government’s general fiscal policy”. The methods and policies of debt management depend on the objective economic conditions existing in different countries and at different times in the same country. The above definition clearly explains the meaning and mechanism of public debt management. Proportionate amounts of the different types used, the selection of the pattern of debt maturities, the amount of debt placed with the different classes of holders, the decision to repay.

According to Philips E. Taylor, public debt management should sub-serve three important principles:

a) The policies pursued must be able to extract from the public, without undue coercion, the necessary loans to finance a deficit or to replace maturing securities, and this should be done at the lowest feasible interest cost

b) The entire transactions should serve the economic objectives of stable growth

c) The debt should be so placed as to minimize the need to enter the market when it is inconvenient or unpropitious to do so.

However, we should admit that there exist conflicts among these objectives. It may be noted from the above first principle that debt management should be capable of providing the required amount from the lending market. Also, loan amount need to be procured at reasonable cost as interest payments have a bearing on revenue account of the budgets. The first principle also requires a number of debt instruments capable of tapping the loanable funds in the economy. It also implies the freedom and maneuverability to offer the terms like maturities and interest rates. Of course, this requires cooperation from the monetary authorities to create favorable money conditions.

With regard to the second principle, debt management policy requires flexibility to achieve stable economic growth. If the debt management policy, along with other economic policies, fails to achieve the price stability, it amounts to detracting the first principle also. The third principle stated above can best be served by lengthening maturities like the British Consols which never mature. In such a case retiring and refunding of debt takes place at the choice of the Treasury.

**Repayment of Public Debt**

Generally governments borrow huge amounts to finance expenditure both of developmental and non-developmental nature. A government, which borrows, has to repay the debt by imposing taxes. Even if it postpones the repayment of the principal amount, it does require paying the interest amount from time to time as per the prescribed terms at which it issued the bonds. The fact is that the government may postpone the repayment of the public debt once or twice but not indefinitely. As repayment and servicing of the debt demands imposition of additional doses of taxation, governments often defer the repayment of public debt. The government generally makes provisions for redemption of the debt when the bonds are issued.

Now let us know briefly the meaning of such words as the refunding, redemption and repudiation before explaining various measure of repayment. Refunding is a method in which the maturing bonds are replaced by new bonds. This process of refunding involves no liquidation of the money burden of public debt. This type of repayment gives the government temporary relief. On the other hand redemption means the outright repayment of a loan. Repudiation is altogether different from redemption, though it is also one way of getting rid of the burden of a debt. In this case neither the interest nor the principal amount would be paid by the government. In other words, government in this case just refuses to honor the post debts. As repayment of the debts will have to be undertaken by rational government, the advantages of repayment and methods of repayment are explained below.

**Advantages of Repayment**

1) It raises the credit of the government

2) It will produce salutary effects on the people if simultaneously repayment efforts are made

3) It saves the cost of debt administration

4) Debt repayment is a deflationary measure

5) It reduces the scope for extravagant expenditure of the government

6) Repayment also saves the future generations from paying additional doses of taxation

7) It helps the government to raise loans in future

**Methods of Repayment**

1. Repudiation
2. Conversion
3. Sinking Fund
4. Surplus Budget
5. Terminal Annuities
6. Capital Levy

**Deficit Financing of the Government**

Deficit financing in advanced countries is used to mean an excess of expenditure over revenue the gap being covered by borrowing from the public by the sale of bonds and by creating new money. In India, and in other developing countries, the term deficit financing is interpreted in a restricted sense.

The National Planning Commission of India has defined deficit financing in the following way. The term ‘deficit financing’ is used to denote the direct addition to gross national expenditure through budget deficits, whether the deficits are on revenue or on capital account.

In Indian terminology, the term “deficit financing” connotes that financial scheme of the government expenditure in which the deficit is met by utilizing the cash balances with the Reserve Bank or by taking loans from the Reserve Bank. In practice, however, the latter system has been favoured by the government.

The essence of such policy lies in government spending in excess of the revenue it receives. The government may cover this deficit either by running down its accumulated balances or by borrowing from the banking system (mainly from the central bank of the country).

There are some situations when deficit financing becomes absolutely essential. In other words, there are various purposes of deficit financing. To finance war-cost during the Second World War, massive deficit financing was made. Being war expenditure, it was construed as an unproductive expenditure during 1939-45. However, Keynesian economists do not like to use deficit financing to meet defence expenditures during war period. It can be used for developmental purposes too.

Developing countries aim at achieving higher economic growth. A higher economic growth requires finances. But private sector is shy of making huge expenditure. Therefore, the responsibility of drawing financial resources to finance economic development rests on the government. Taxes are one of such instruments of raising resources. Being poor, these countries fail to mobilize large resources through taxes. Thus, taxation has a narrow coverage due to mass poverty. A very little is saved by people because of poverty. In order to collect financial resources, government relies on profits of public sector enterprises. But these enterprises yield almost negative profit. Further, there is a limit to public borrowing.

In view of this, the easy as well as the short-cut method of marshalling resources is the deficit financing. Since the launching of the Five Year Plans in India, the government has been utilizing seriously this method of financing to obtain additional resources for plans. It occupies an important position in any programme of our planned economic development.

Deficit financing practice in which a government spends more money than it receives as revenue the difference being made up by borrowing or minting new funds. Although budget deficits may occur for numerous reasons, the term usually refers to a conscious attempt to stimulate the economy by lowering tax rates or increasing government expenditures. The influence of government deficits upon a national economy may be very great. It is widely believed that a budget balanced over the span of a business cycle should replace the old ideal of an annually balanced budget. Some economists have abandoned the balanced budget concept entirely, considering it inadequate as a criterion of public policy.

Deficit financing, however, may also result from government inefficiency, reflecting widespread tax evasion or wasteful spending rather than the operation of a planned countercyclical policy.

Where capital markets are undeveloped, deficit financing may place the government in debt to foreign creditors. In addition, in many less-developed countries, budget surpluses may be desirable in themselves as a way of encouraging private saving.

**Fiscal policy**

**Meaning of Fiscal Policy**: In common parlance fiscal policy means the budgetary manipulations affecting the macro economic variables, output, employment, saving, investment etc.

Fiscal policy or management of government finances in a federal structure is linked with devolution of functional responsibility to different levels of government and fiscal instruments (sources of finances) to carry out the functions. The devolution of functions demarcates the spheres of responsibility of different governmental units; for instance provision of national defence by central government, irrigation by state governments, and street lighting by municipalities. The demarcations of sources of finances endow the ability and flexibility to different governmental units to undertake the functions assigned to them. The functional responsibility and revenue powers to different levels of government many a time are enshrined in the Constitution of the country.

Efficient assignment provides sufficient flexibility to all governmental units in designing levels of public services to be provided and levying reasonable tax keeping the preference of citizens in mind. The functional demarcation also helps in minimizing the inter-jurisdictional tax and expenditure benefit spillovers and provides adequate resources in the hand of central government to undertake regional equalization.

On the revenue side, governments in different levels have access to taxation powers and non-tax revenue sources. In addition to these revenue sources, there are others ways allocating funds which is called intergovernmental transfers. Local governments almost invariably depend in part, and sometimes heavily, upon transfers from upper- level governments to finance the services for which they are responsible. Intergovernmental transfer of resources play significant role financing the budget of the lower level of governments.

The appropriate level and design of such transfers has been an important concern in the fiscal policy of governments in federal system. Depending upon how the taxation powers are assigned and taxes collected, some of the taxes having wide base are distributed between the governments. The flow of resources from one level to another depends on institutional arrangement, like in India Central Finance Commission and Planning Commission. In this context borrowing from market and abroad are significant as the debt instruments and power to borrow have been delineated in the assignment of financial powers.

Both the central government and state governments present their budgets annually that give accounts of detailed expenditures under various heads and revenue sources that finance the expenditures. In many countries including India fiscal plans are prepared for a medium term (3 to 5 years) both at central and state levels by projecting revenues and expenditures. The expenditures given in the budget typically follows the functions assigned to each level of the government and revenues from the assigned sources. In the case of central government budget the revenues mentioned are net of the transfers to the state governments and in the case of state governments, budgets include the revenue transfers from the central governments.

**Definitions**

“The term fiscal policy refers to a policy under which the Government uses its expenditure and revenue programmes to produce desirable effects and avoid undesirable effects on the national income, production and employment” - Arthur Smithies

“By fiscal policy is meant the use of public finance or expenditure, taxes, borrowing and financial administration to further our national economic objectives” - Buehler

**Fiscal Instruments**

Fiscal Policy is implemented through fiscal instruments also called ‘fiscal tools’ or fiscal levers: Government expenditure, taxation and borrowing are the fiscal tools.

**i)** **Taxation:** Taxes transfer income from the people to the Government. Taxes are either direct or indirect. An increase in tax reduces disposable income. So taxation should be raised to control inflation. During depression, taxes are to be reduced.

**ii)** **Public Expenditure:** Public expenditure raises wages and salaries of the employees and thereby the aggregate demand for goods and services. Hence public expenditure is raised to fight recession and reduced to control inflation.

**iii)** **Public debt:** When Government borrows by floating a loan, there is transfer of funds from the public to the Government. At the time of interest payment and repayment of public debt, funds are transferred from Government to public.

**Objectives**

Fiscal policy must be designed to be performed in two ways-by expanding investment in public and private enterprises and by diverting resources from socially less desirable to more desirable investment channels. The objective of fiscal policy is to maintain the condition of full employment, economic stability and to stabilize the rate of growth. For an under-developed economy, the main purpose of fiscal policy is to accelerate the rate of capital formation and investment. Generally following are the objectives of a fiscal policy in a developing economy:

1. Full employment
2. Price stability
3. Accelerating the rate of economic development
4. Optimum allocation of resources
5. Equitable distribution of income and wealth
6. Economic stability
7. Capital formation and growth

**Full Employment**

The first and foremost objective of fiscal policy in a developing economy is to achieve and maintain full employment in an economy. In such countries, even if full employment is not achieved, the main motto is to avoid unemployment and to achieve a state of near full employment. Therefore, to reduce unemployment and under-employment, the state should spend sufficiently on social and economic overheads. These expenditures would help to create more employment opportunities and increase the productive efficiency of the economy.

In this way, public expenditure and public sector investment have a special role to play in a modern state. A properly planned investment will not only expand income, output and employment but will also step up effective demand through multiplier process and the economy will march automatically towards full employment. Besides public investment, private investment can also be encouraged through tax holidays, concessions, cheap loans, subsidies etc.

In the rural areas attempts can be made to encourage domestic industries by providing them training, cheap finance, and equipment and marketing facilities. Expenditure on all these measures will help in eradicating unemployment and under-employment. In this context, Prof. Keynes made the following recommendations to achieve full employment in an economy:

(a) To capture the excessive purchasing power and to curb private spending

(b) Compensate the deficiency in private investment through public investment

(c) Cheap money policy or lower interest rates to attract more and more private entrepreneurs

**Price Stability**

There is a general agreement that economic growth and stability are joint objectives for underdeveloped countries. In a developing country, economic instability is manifested in the form of inflation. Prof. Nurkse believed that “inflationary pressures are inherent in the process of investment but the way to stop them is not to stop investment. They can be controlled by various other ways of which the chief is the powerful method of fiscal policy.”

Therefore, in developing economies, inflation is a permanent phenomenon where there is a tendency to the rise in prices due to expanding trend of public expenditure. As a result of rise in income, aggregate demand exceeds aggregate supply. Capital goods and consumer goods fail to keep pace with rising income.

Thus, these result in inflationary gap. The price rise generated by demand pull reinforced by cost push inflation leads to further widening the gap. The rise in prices raises demand for more wages. This further gives rise to repeated wage-price spirals. If this situation is not effectively controlled, it may turn into hyper inflation.

In short, fiscal policy should try to remove the bottlenecks and structural rigidities which cause imbalance in various sectors of the economy. Moreover, it should strengthen physical controls of essential commodities, granting of concessions, subsidies and protection in the economy. In short, fiscal measures as well as monetary measures go side by side to achieve the objectives of economic growth and stability.

**To Accelerate the Rate of Economic Growth**

Primarily, fiscal policy in a developing economy, should aim at achieving an accelerated rate of economic growth. But a high rate of economic growth cannot be achieved and maintained without stability in the economy. Therefore, fiscal measures such as taxation, public borrowing and deficit financing etc. should be used properly so that production, consumption and distribution may not adversely affect. It should promote the economy as a whole which in turn helps to raise national income and per capita income.

In this connection it is significant to quote the views of Mrs. Hicks, who observed, “now that fiscal policy has been developed as an established economic function of a government, every country is anxious to gear its public finance in pursuit of the twin aims of stability and growth, but their relative importance is very differently regarded from one country to another… A steady rate of expansion will tend to reduce the violence of such fluctuations as may occur; a successful full employment policy will provide an atmosphere which is congenial for growth.”

**Economic Stability**

Fiscal measures, to a larger extent, promote economic stability in the face of short-run international cyclical fluctuations. These fluctuations cause variations in terms of trade, making the most favourable to the developed and unfavorable to the developing economies. So, for the purpose of bringing economic stability, fiscal methods should incorporate built-in-flexibility in the budgetary system so that income and expenditure of the government may automatically provide compensatory effect on the rise or fall of the nation’s income.

Therefore, fiscal policy plays a leading role in maintaining economic stability in the face of internal and external forces. The instability caused by external forces is corrected by a policy, popularly known as ‘tariff policy’ rather than aggregative fiscal policy. In the period of boom, export and import duties should be imposed to minimize the impact of international cyclical fluctuations.

To curb the use of additional purchasing power, heavy import duty on consumer goods and luxury import restrictions are essential. During the period of recession, government should undertake public works programmes through deficit financing. In nut shell, fiscal policy should be viewed from a larger perspective keeping in view the balanced growth of various sectors of the economy.

**Equitable Distribution of Income and Wealth**

It is needless to emphasize the significance of equitable distribution of income and wealth in a growing economy. Generally, inequality in wealth persists in such countries as in the early stages of growth, it concentrates in few hands. It is also because private ownership dominates the entire structure of the economy. Besides, extreme inequalities create political and social discontentment which further generate economic instability. For this, suitable fiscal policy of the government can be devised to bridge the gap between the incomes of the different sections of the society.

To reduce inequalities and to do distributive justice, the government should invest in those productive channels which incur benefit to low income groups and are helpful in raising their productivity and technology. Therefore, redistributive expenditure should help economic development and economic development should help redistribution.

Thus, well-planned fiscal programme, public expenditure can help development of human capital which in turn possesses positive effects on income distribution. Regional disparities can also be removed by providing incentives to backward regions. A redistributive tax policy should be highly progressive and aim at imposing heavy taxation on the richer and exempting poorer sections of the community. Similarly, luxurious items, which are consumed by the higher section, may be subject to heavy taxation.

**Capital formation**

Capital formation is essential for rapid economic development. Tax relief helps to increase disposable income, savings and thereby capital formation. Government expenditure on infrastructure development like power and transport encourages private investment.

**Regional Balance**

Fiscal incentives for industries in the backward regions help to narrow down regional imbalances. Public expenditure may be used to start industrial estates so that industrial activity is stimulated in backward regions.

**Interdependence between Fiscal and Monetary Policies**

Fiscal and monetary policies are frequently used together to restore an economy to full employment output. For example, suppose an economy is experiencing a severe recession. One possible solution would be to engage in expansionary fiscal policy to increase aggregate demand. The central bank can also do its part by engaging in expansionary monetary policy.

On the other hand, we can’t assume that the government and the central bank will always see eye-to-eye on the economy, and it is possible that these two entities work against each other. For example, suppose a government wants to increase output and decrease unemployment by increasing government spending. If the economy is operating on an upward-sloping aggregate supply curve (in other words, if prices are sticky), then this is also going to lead to inflation.

Recall that most central banks operate under a dual mandate to encourage full employment and control inflation. If the central bank believes that the unemployment rate is lower than the natural rate of unemployment and there is inflation, it might take action to counteract what the government is doing to control inflation. For example, if the government engages in expansionary fiscal policy that leads to inflation, the central bank might decrease the money supply to lower inflation.

Monetary policy and fiscal policy refer to the two most widely recognized tools used to influence a nation's economic activity. Monetary policy is primarily concerned with the management of interest rates and the total supply of money in circulation and is generally carried out by central banks, such as the U.S. Federal Reserve. Fiscal policy is a collective term for the taxing and spending actions of governments. In the United States, the national fiscal policy is determined by the executive and legislative branches of the government.

**Monetary Policy**

Central banks typically have used monetary policy to either stimulate an economy or to check its growth. By incentivizing individuals and businesses to borrow and spend, the monetary policy aims to spur economic activity. Conversely, by restricting spending and incentivizing savings, monetary policy can act as a brake on inflation and other issues associated with an overheated economy.

Generally speaking, the aim of most government fiscal policies is to target the total level of spending, the total composition of spending, or both in an economy. The two most widely used means of affecting fiscal policy are changes in government spending policies or in government tax policies.

If a government believes there is not enough business activity in an economy, it can increase the amount of money it spends, often referred to as stimulus spending. If there are not enough tax receipts to pay for the spending increases, governments borrow money by issuing debt securities such as government bonds and, in the process, accumulate debt. This is referred to as deficit spending.

By increasing taxes, governments pull money out of the economy and slow business activity. Typically, fiscal policy is used when the government seeks to stimulate the economy. It might lower taxes or offer tax rebates in an effort to encourage economic growth. Influencing economic outcomes via fiscal policy is one of the core tenets of Keynesian economics.

When a government spends money or changes tax policy, it must choose where to spend or what to tax. In doing so, government fiscal policy can target specific communities, industries, investments, or commodities to either favor or discourage production—sometimes, its actions are based on considerations that are not entirely economic. For this reason, fiscal policy often is hotly debated among economists and political observers.

Essentially, it is targeting aggregate demand. Companies also benefit as they see increased revenues. However, if the economy is near full capacity, expansionary fiscal policy risks sparking inflation. This inflation eats away at the margins of certain corporations in competitive industries that may not be able to easily pass on costs to customers; it also eats away at the funds of people on a fixed income.

The government uses both monetary and fiscal policy to meet the county’s economic objectives. The central bank of a country mainly administers monetary policy. In India, the Monetary Policy is under the Reserve Bank of India or RBI. Monetary policy majorly deals with money, currency, and interest rates. On the other hand, under the fiscal policy, the government deals with taxation and spending by the Centre.

**Fiscal Policy for Stabilization**

The economy does not always work smoothly. There often occur fluctuations in the level of economic activity. At times the economy finds itself in the grip of recession when levels of national income, output and employment are far below their full potential levels. During reces­sion, there is a lot of idle or unutilized productive capacity, that is, available machines and factories are not working to their full capacity.

On the other hand, at times the economy is ‘overheated which means inflation {i.e. rising prices) occurs in the economy. Thus, in a free market economy there is a lot of economic instability. The classical economists believed that an automatic mechanism works to restore stability in the economy; recession would cure itself and inflation will be automatically controlled.

However, the empirical evidence during the 1930s when severe depression took place in the Western capitalist economies and also the evidence of post Second World II period amply shows that no such automatic mechanism works to bring about stability in the economy.

That is why Keynes argued for intervention by the Government to cure depression and inflation by adopting appropriate tools of macroeconomic policy. The two im­portant tools of macroeconomic policy are fiscal policy and monetary policy.

According to Keynes, monetary policy was ineffective to lift the economy out of depression. He emphasized the role of fiscal policy as an effective tool of stabilizing the economy. However, in view of the modem econo­mists both fiscal and monetary policies play a useful role in stabilising the economy.

**Similarities and differences between Fiscal and Monetary Policy**

|  |  |  |
| --- | --- | --- |
|  | **Monetary Policy** | **Fiscal Policy** |
| **Tool** | Interest rates | Tax and government spending |
| **Effect** | Cost of borrowing/mortgages | Budget deficit |
| **Distribution** | Higher interest rates hit homeowners but benefit savers | Depends which taxes you raise |
| **Exchange rate** | Higher interest rates cause appreciation | No effect on exchange rate |
| **Supply-side** | Limited impact | Higher taxes may affect incentives to work |

Both aim at creating a more stable economy characterized by low inflation and positive economic growth. Both fiscal and monetary policy is an attempt to reduce economic fluctuations and smooth out the economic cycle. The main difference is that monetary policy uses interest rates set by the Central Bank.  Fiscal policy involves changing government spending and taxes to influence the level of aggregate demand.

**Automatic versus Discretionary Stabilization**

* **Discretionary policy**: Actions taken in response to changes in the economy. These acts do not follow a strict set of rules; rather, they use subjective judgment to treat each situation in unique manner.
* **Automatic stabilizer**: A budget policy that automatically changes to stabilize fluctuations in GDP.

Automatic stabilizers and discretionary policy differ in terms of timing of implementation and what each approach sets out to achieve. In fiscal policy, there are two different approaches to stabilizing the economy: automatic stabilizers and discretionary policy. Both approaches focus on minimizing fluctuations in real GDP but have different means of doing so.

**Discretionary Policy**

Discretionary policy is a macroeconomic policy based on the judgment of policymakers in the moment, as opposed to a policy set by predetermined rules. Discretionary policies refer to actions taken in response to changes in the economy, but they do not follow a strict set of rules; rather, they use subjective judgment to treat each situation in unique manner. In practice, most policy changes are discretionary in nature. Examples may include passing a new spending bill that promotes a certain cause, such as green technology, or the creation of a federal jobs program. Discretionary policies are generally laws enacted by Congress, which requires that any policy go through the same vetting and marking up process as any other law.

**Automatic Stabilizers and Discretionary Policy**

The key difference between these two types of financial policy approaches is timing of implementation. When the economy begins to go through an economic fluctuation, automatic stabilizers immediately respond without any official or government body having to take action. With discretionary policy there is a significant time lag. Before action can be taken, Congress must first determine that there is an issue and that action needs to be taken. Then Congress needs to design and implement a policy response. Then the law needs to be passed and the relevant agencies need to adjust and alter any necessary procedures so they can carry out the law. It is due to these significant lags that economists like Milton Friedman believed that discretionary fiscal policy could be destabilizing.

On the other hand, automatic stabilizers are limited in that they focus on managing the aggregate demand of a country. Discretionary policies can target other, specific areas of the economy. Discretionary policies can address failings of the economy that are not strictly tied to aggregate demand. For example, if an economy is going through a recession because its workers lack a certain set of skills, automatic stabilizers cannot address that problem. Government programs, such as retraining, can address this problem.

Finally, automatic stabilizers, such as the tax code and social service agencies, exist prior to an economic fluctuation. Discretionary policies are made in response to a fluctuation and only come into existence once a fluctuation starts to occur. Of course, it is not possible to create an automatic stabilizer for every potential economic issue, so discretionary policy allows policymakers flexibility.

**The Limitations of Automatic Stabilizers**

A limitation of the automatic stabilization policy is that it doesn't work if inflation is caused by factors other than those affecting aggregate demand. Discretionary fiscal policies, on the other hand, can address economic issues that are not tied to the aggregate demand. Additionally, automatic stabilizers are not an option in less-developed countries as the country must have a well-developed tax and social welfare system in place. Furthermore, they may have an exaggerated effect on government finances.

For instance, government borrowing during times of recession increases, which in turn limits the funds available to the private sector for research, investments and other factors that would otherwise stimulate economic growth. Whenever government expenditure increases, the money has to come from somewhere. Both automatic stabilizers and discretionary fiscal policies have their perks and limitations. Automatic stabilizers alone are not enough to correct the problem during times of recession or inflation. For this reason, government intervention may be necessary in order to stabilize the economy.

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