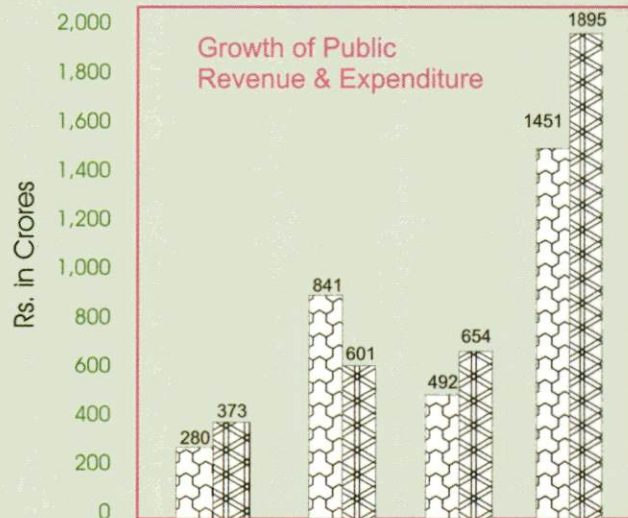
Karnataka State Open University
Manasagangothri, Mysore- 570 006

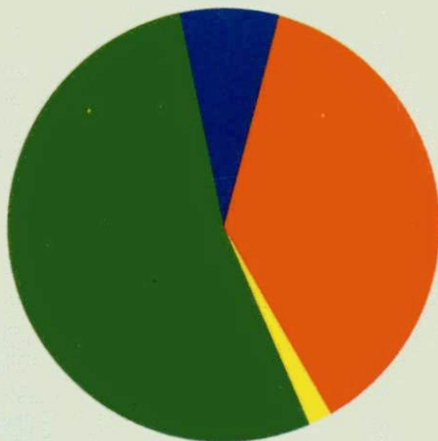
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮುಕ್ತ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ
ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು ೫೭೦ ೦೦೬

COURSE : 4

M.A. (PREVIOUS)
PUBLIC ECONOMICS

679





ALLOCATION OF RESOURCES

- Agriculture
- Industry
- Tertiary Sector
- Other Sector

DISTRIBUTION of PUBLIC GOODS

- Public Sector Goods
- Private Goods
- Joint Goods

Karnataka State Open University

Course 4
Block 5

ಉನ್ನತ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಇರುವ ಅವಕಾಶಗಳನ್ನು ಹೆಚ್ಚಿಸುವುದಕ್ಕೆ ಮತ್ತು ಶಿಕ್ಷಣವನ್ನು ಪ್ರಜಾತಂತ್ರೀಕರಿಸುವುದಕ್ಕೆ ಮುಕ್ತ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ವ್ಯವಸ್ಥೆಯನ್ನು ಆರಂಭಿಸಲಾಗಿದೆ.

ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ **1986**

'The Open University system has been initiated in order to augment opportunities for higher education and as instrument of democrating education.

National Education Policy 1986

ಮುಕ್ತ ವಿಶ್ವವಿದ್ಯಾನಿಲಯವು ದೂರಶಿಕ್ಷಣ ಪದ್ಧತಿಯಲ್ಲಿ ಬಹುಮಾಧ್ಯಮಗಳನ್ನು ಉಪಯೋಗಿಸುತ್ತದೆ.
............................ವಿದ್ಯಾಕಾಂಕ್ಷಿಗಳನ್ನು ಜ್ಞಾನ ಸಂಪಾದನೆಗಾಗಿ ಕಲಿಕಾ ಕೇಂದ್ರಕ್ಕೆ ಕೊಂಡೊಯ್ಯುವ ಬದಲು, ಜ್ಞಾನ ಸಂಪತ್ತನ್ನು ವಿದ್ಯೆ ಕಲಿಯುವವರ ಬಳಿ ಕೊಂಡೊಯ್ಯುವ ವಾಹಕವಾಗಿದೆ.

ಡಾ. ಕುಳಂದೈಸ್ವಾಮಿ

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ಸುವರ್ಣ ಕರ್ನಾಟಕ ವರ್ಷ 2006

ವಿಶ್ವ ಮಾನವ ಸಂದೇಶ

ಪ್ರತಿಯೊಂದು ಮಗುವು ಹುಟ್ಟುತ್ತಲೇ - ವಿಶ್ವಮಾನವ. ಬೆಳೆಯುತ್ತಾ ನಾವು ಅದನ್ನು **'ಅಲ್ಪ ಮಾನವ'**ನನ್ನಾಗಿ ಮಾಡುತ್ತೇವೆ. ಮತ್ತೆ ಅದನ್ನು **'ವಿಶ್ವಮಾನವ'**ನನ್ನಾಗಿ ಮಾಡುವುದೇ ವಿದ್ಯೆಯ ಕರ್ತವ್ಯವಾಗಬೇಕು.

ಮನುಜ ಮತ, ವಿಶ್ವ ಪಥ, ಸರ್ವೋದಯ, ಸಮನ್ವಯ, ಪೂರ್ಣದೃಷ್ಟಿ ಈ ಪಂಚಮಂತ್ರ ಇನ್ನು ಮುಂದಿನ ದೃಷ್ಟಿಯಾಗಬೇಕಾಗಿದೆ. ಅಂದರೆ, ನಮಗೆ ಇನ್ನು ಬೇಕಾದುದು ಆ ಮತ ಈ ಮತ ಅಲ್ಲ; **ಮನುಜ ಮತ.** ಆ ಪಥ ಈ ಪಥ ಅಲ್ಲ; **ವಿಶ್ವ ಪಥ.** ಆ ಒಬ್ಬರ ಉದಯ ಮಾತ್ರವಲ್ಲ; ಸರ್ವರ ಸರ್ವಸ್ತರದ ಉದಯ. ಪರಸ್ಪರ ವಿಮುಖವಾಗಿ ಸಿಡಿದು ಹೋಗುವುದಲ್ಲ; ಸಮನ್ವಯಗೊಳ್ಳುವುದು. ಸಂಕುಚಿತ ಮತದ ಆಂಶಿಕ ದೃಷ್ಟಿ ಅಲ್ಲ; ಭೌತಿಕ ಪಾರಮಾರ್ಥಿಕ ಎಂಬ ಭಿನ್ನದೃಷ್ಟಿ ಅಲ್ಲ; ಎಲ್ಲವನ್ನು ಭಗವದ್ ದೃಷ್ಟಿಯಿಂದ ಕಾಣುವ **ಪೂರ್ಣದೃಷ್ಟಿ.**

ಕುವೆಂಪು

Gospel of Universal Man

Every Child, at birth, is the universal man. But, as it grows, we turn it into "a petty man". It should be the function of education to turn it again into the enlightened "universal man".

The Religion of Humanity, the Universal Path, the Welfare of All, Reconciliation, the Integral Vision- these ***five mantras*** should become View of the Future. In other words, what we want henceforth is not this religion or that religion, but the Religion of Humanity ; not this path or that path, but the Universal Path ; not the well-being of this individual or that individual, but the Welfare of All ; not turning away and breaking off from one another, but reconciling and uniting in concord and harmony ; and, above all, not the partial view of a narrow creed, not the dual outlook of the material and the spiritual, but the Integral Vision of seeing all things with the eye of the Divine.

Kuvempu

Karnataka State
Open University
Managangotri
Mysore - 570006

M.A. (Previous)
Economics
Course - IV

BLOCK 5

		P.No.
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BLOCK - V
SOURCES OF PUBLIC REVENUE

INTRODUCTION

Block Introduction

The Taxation constitutes the most important source of revenue for the modern government. A tax possesses the following essential characteristics.

a) It is a compulsory payment and every citizen is legally bound to pay the tax imposed upon him.

b) The tax is paid by the tax payer to enable the government to incur certain expenses in the common interest of society.

c) The payment of a tax by a person does not entitle him to receive any direct benefits from the government in return for the tax. There is no relationship between the tax paid by the person and the benefits that he may receive as a result of government expenditure.

The government of every country has to perform certain special functions. Defence of the country, the maintenance of peace and security are some of the obligatory functions of the government. But the provision of education and the establishment of the hospitals the building of the parks, etc., are optional functions adequately and efficiently, government needs funds from the public. Public finance is that science which deals with the income and expenditure of the government.

This Block comprises of seven units. Unit-15 deals with cannons of taxation, Unit-16 studies different theories of taxation, Unit-17 focuses on the optional taxation and Unit-18 embarks in detail on various incidence of taxation.

Public Economics

Block – 5 Course – 4

Public Debt

Public debt simply means debt owed by the government at any level. In recent years public debt has become an important means of fiscal stabilization and therefore an important constituent of macro economic policy. Whenever there is deficit in the budget, governments may borrow funds both from internal and external sources. In recent years particularly LDCs are suffering from heavy debt burden and consequential adverse effects. Therefore, it is absolute necessary and also interesting to know more about public debt, sources of public borrowings, principles of public borrowings, economic effects of public debt, burden of public debt, issues relating to shifting of debt burden, essence of debt management, objectives and principles of debt management and lastly redemption of public debt. A good understanding of all these inter-related aspects helps us in evaluating the role and performance of government in economic matters.

Unit-19 focuses on the theoretical aspects of public debt, Unit-20 deals with role and importance of public debt, and sources and effects of public debt. Unit-21 focuses exclusively on the issue of burden of debt, its management and redemption.

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Unit – 15 : TAXATION - CONCEPTS - TYPES- CANONS OF TAXATION - NATURE OF TAXATION -PROGRESSIVE - PROPORTIONAL -REGRESSIVE

STRUCTURE

15.0 Objectives

15.1 Introduction

15.2 Various Sources of Public Revenue

15.3 Types of Public Revenue

15.3.1 Gratuitions Revenue

15.3.2 Contractual Revenue

15.3.3 Compulsory Revenue

15.4 Difference between Tax and a Fee

15.5 Difference between Fee and a special Assessment

15.6 Difference between Tax and a special Assessment

15.7 Other Categories of Revenue

15.8 Various sources of Public Revenue

15.9 Main Objectives of a Tax

15.10 Basic Characteristics of a Tax

15.11 Canons of Taxation

15.12 Meaning of Progressive, Proportional & Regressive taxes

15.13 Summary / Conclusion

15.14 Suggested Books

15.15 Model Examination Questions

15.0 OBJECTIVES

The purpose of this unit is to deal with the various sources from which the state raises revenue in order to perform its various functions, to know the meaning of progressive, proportional and regressive taxes and also to discuss the various canons of taxation, on the basis of which taxes are imposed.

After reading the unit, you will be able to:

- List the various sources of public revenue
- Classify the public revenue into different categories
- Explain different public revenue concept such as tax, fee, special assessment
- Identify the characteristics of taxes
- Analyse different canons of taxation
- Explain progressive tax system and its merits and demerits
- Discuss proportional tax system and its advantages and disadvantages and
- Identify the concepts of regressive tax and degressive taxation

15.1 INTRODUCTION

There are many sources for public authority to get revenue. Modern states have many functions to perform and therefore, there is every need to raise adequate public revenue from various sources. The revenue of a public authority may be defined either in a broad and or in a narrow sense. The income of public authority in a broad sense includes all receipts while in the narrow sense it includes only such of those receipts which are commonly attributed to taxes, fees, etc, these receipts increase the assets of the government without increasing its liabilities. In the broad sense, the revenue of the state includes not only the amount realised through taxes of all kinds but also revenue attained from the sale of commodities produced by state as well as the earnings from the departmental undertakings such as the Railways, Post office etc; and also receipts from public borrowings and paper money created. Many theories have been formulated for imposing taxes. Although most of the economists agreed that taxes should be imposed on the basis of ability to pay criterion, there was no consensus about the measurement and

interpretation of 'ability to pay' as far as taxation is concerned. Some have argued for progressive taxation while some others for proportional taxation. Especially after Second World War, there has been a tremendous increase in state activities, which need substantial revenues, and hence the importance of taxation as the main source of public revenue, it is worth while for us to know manner in which taxes ought to be imposed. It has been argued by some economists that there should be a single tax only instead of having many taxes. Some have favoured taxes on consumption while others have favoured taxes on income, wealth, and property. Likewise in regard to the rate structure there is hardly any consensus among many economists. While progressive taxation had been supported by certain economists, proportional taxation also was considered important in the tax structure of an economy. Amidst all these divergent opinions, what should be the guidelines, on the basis of which taxes can be imposed. It becomes therefore necessary to study and understand the canons of taxation.

15.2 VARIOUS SOURCES OF PUBLIC REVENUE

In the modern times, the various sources of public revenue are:

a) The taxes of various types.
b) Fines imposed by the government on the offenders
c) Compulsory loans
d) Tributes and indemnities arising out of war or from other reasons
e) Income from public such as lease of government lands
f) Profits of the public enterprises
g) Fees for the services rendered by the government
h) Receipts from voluntary public loans
i) Betterment levy and other assessment
j) Voluntary gifts etc.

15.3 TYPES OF PUBLIC REVENUE

Now we may deal with the classification of public revenue. Public revenue has been classified into different categories by different economists. For instance Adamsmith classified public revenue into two classes.

a) Income derived from state property.

b) Income derived from public.

In the first category we may have the revenue from public sector undertakings while in the second category, the revenue is received from taxation. According to Bastable also, it has been divided into two categories namely:

a) The income which the state receives as a large corporation for providing goods and services to the people.

b) The income which it receives due to its sovereign power.

It can be seen that the first category is similar to that of an individual or a company receiving income by way of selling goods and services. The second category refers to taxation. According to H.C.Adams, public revenue is divided into three categories namely:

1) Direct revenue, which consists of income from public industries, gifts, railways, post offices, etc.
2) Derivative revenue, which refers to taxes, fees, fines, etc.
3) Anticipating revenue, which refers to the income, received due to sale of bonds or other forms of government securities. This last category mainly deals with public debt.

Dalton has classified public revenue into twelve main categories.

1) Tax
2) Tributes and indemnities whether arising out of war or otherwise
3) Forced loans which are prevalent in olden days
4) Pecuniary penalties for offender imposed by courts of justice.
5) Receipts from public property passively held like public lands leased out to tenants.
6) Income received from public industries charging not more than the competitive price.
7) Fees or payments made for services not in the nature of business services performed by public officials such as the registration of births.
8) Receipts from voluntary public loans.
9) Receipts from those industries where the government charges monopoly price.
10) Receipts from special assessment.
11) Receipts from the use of printing press for the purpose of meeting public expenditure by the issue of paper money.
12) Voluntary gifts. After giving this long list, Dalton observed that their most of the cases, the distinction is not clear because one kind of revenue overlaps gradually into another.

For a better perspective, we may first deal with the classification given by Seligman a noted writer of public finance and latter find out its relevance to modern times. Public finance has been broadly divided into three categories namely:

a) Gratuitions revenue

b) Contractual revenue

c) Compulsory revenue.

15.3.1 GRATUITIONS REVENUE

According to Seligman the first category of gratuitions income consists of gifts, donations etc. For obtaining such incomes the state does not any institution or individual. They are gratuitously made. We must however know that the importance of this kind of income has considerably reduced during the recent time, But grouping all such incomes as a class by themselves is justified as they differ from all the rest of the revenues the state is supposed to get. There is no obligation on the part of the state to provide something (Service or good) in return to the persons who pay them, items like gifts etc, which are neither very certain nor uniform in amount from year to year. It may also be observed that the incidence of gifts is not always proportional to the ability of the persons who make payments in the form of gifts.

15.3.2 CONTRACTUAL REVENUE

The second category relates to contractual revenue. It includes the revenues in the form of rents, sale proceeds from the goods / services sold by the state to the public etc. The state owns property in the form of land and buildings, which are normally leased out to the people on certain contractual terms. Similarly, the sale of goods produced by the government enterprises as also of services like railways, post office, etc. provide the state with certain revenue. For all such type of contractual incomes, Seligman calls them as 'prices' as they resemble very much the prices of goods or services charged by private individuals. However, such public utilities have been a matter of controversy unlike those private goods determined by market mechanism.

15.3.3 COMPULSORY REVENUE

The third category relates to compulsory revenue, which broadly included taxes, fees, fines, special assessment etc. The state derives revenues from its domain, penal &taxing powers. The state has

the powers of eminent domain in the sense that it can expropriate the property of its citizens, if necessary. But normally the power is not exercised by the state.

The state is empowered to exercise its penal power and therefore, can impose fines and penalties, which should be paid. The taxing power is very important from the revenue point of view. It was not given importance in olden days when the states activities were kept at minimum and all taxes were considered as evil. But in modern days, most of the state revenue comes from various types of taxes imposed on the public.

Seligman defines certain important items of revenues included under this compulsory category: Fee, Tax, Special Assessment

Fee: 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 special advantage on the fee-payer.

Tax: A tax is compulsory contribution from the person to the government to defray the expenses incurred in the common interest of all, without reference to special benefit conferred.

Special Assessment: A special assessment is a payment made once and for all to defray the cost of a specific improvement to property undertaken in the public interest and levied by the government in proportion to the particular benefit acquiring to the property owner.

Check your progress: I

1. List any sources of public revenue:

....

....

2. Explain Adamsmith classification of the public revenue:

....

....

15.4 DIFFERENCE BETWEEN TAX AND FEE

a) A tax is levied to defray a past of the expenses incurred by the government in providing general services to the public. A taxpayer does not get a direct return of benefit (i.e. there is no quid – pro quo).

A fee is a payment for receiving a specific service from the government. So, a fee payer is directly benefited.

b) Taxes are imposed on the basis of the 'ability to pay'. A fee is imposed taking into consideration the special benefit according to the fee payer.

c) A fee is adjusted either partly or wholly to the cost of service provided by the government to the fee payer. But not such measurement is possible individually in the case of a tax. It must however remembered that in respect of both fees as well as taxes, the primary intention of the government is to provide benefit to the whole society. But taken individually, we can see that fees confer a special and measurable advantage on the fee payers. Examples are the court fees, registration fees etc. Such individual benefitis not provided for the taxpayers. The intention of the government in charging a fee is to regulate the conduct of the people who are willing to receive the service or benefit from the operations of state activities.

15.5 DIFFERENCE BETWEEN A FEE AND SPECIAL ASSESSMENT

Firstly, special assessment is levied only for specific local improvement while fees could be levied for any service provided by the government. Some of the fees paid to the government are simply meant to get permission to perform a particular activity. The field of operation of special assessment is therefore limited where as that of a fee unlimited.

Secondly, fees have to be paid for every successive service rendered by the government to the people. But a special assessment is paid once for all.

Thirdly, in the case of a special assessment, it is paid by the individual as a member of class, which could receive the benefit. For a fee, it is not the case.

Lastly, we can see that special assessment always is associated with the benefits of real estate where as a fee may benefit other elements also.

15.6 DIFFERENCE BETWEEN A TAX AND SPECIAL ASSESSMENT

We shall see some differences between a special assessment and tax.

a) In case of special assessment, the element of public purpose is clearly seen. It must be possible to identify the beneficiaries.

b) While taxes are compulsory contributions to defray the expenses incurred by the government in the common interest of all, a special assessment is compulsory contribution paid by a beneficiary for the special benefit enjoyed him.

c) Special assessment is always proportional to the benefit enjoyed by the beneficiaries. For ex. If a specific project has increased the property value in a locality, the special assessment is paid in proportion to the properties shared by the people. But in the case of taxes they may be either proportional or progressive.

d) Special assessment is payment made once for all. But taxes may be of recurring nature. But taxes may be of recurring nature. When we compare a special assessment with that of tax, we find that although both are compulsory, a special benefit is associated with the former. So, a special assessment resembles a fee. But even then, there are some differences between a fee and a special assessment.

15.7 OTHER CATEGORIES OF REVENUE

Besides fees, taxes and special assessment, we have some minor resources of revenue such as fines, penalties and donations.

Fines are imposed to prevent people from doing something prohibited by law. If anybody violates the rules & regulations laid down by the government, fines are imposed.

Penalties and forfeitures.also are some kind of fines imposed on the people for non-fulfillment of certain conditions. Foe instance, if a contract work is not completed within the stipulated time, government may impose a penalty on the contractor. Fines, penalties and forfeitures do not yield much revenue to the exchequer. These are imposed to regulate the behaviour of private individuals.

Donations are a kind of gifts, the payment of which is quite uncertain. The government cannot expect much revenue from this source. Similarly, the revenue from escheats is very small. They refer to the properties of people who die without legal heirs or wills. Such properties are appropriated by the government.

Check your progress: II

Explain the following terms relating to Public revenue.

a) Fees b) Tax c) Special assessment d) Fines

e) Penalties f) Escheats

15.8 VARIOUS SOURCE OF PUBLIC REVENUE - A BROAD CLASSIFICATION

The various sources of revenue discussed so far can be broadly classified in the modern sense into:

a) Taxes

b) Administrative Revenue

c) Public Domain and commercial revenue

d) Grants & gifts.

The administrative revenue consists of fees, fines & penalties, escheats, special assessment etc. Under public domain and commercial revenues we have the income from public property and the proceedings of departmental undertaking etc. As far as grants and gifts are concerned, they are usually made by lone government to the other, in order to enable the latter to perform certain specific functions. For ex. In a federal set up, the central government provide the constituent states with certain grants. They need not be repaid, gifts are voluntary contributions.

15.9 MAIN OBJECTIVES OF TAXES

Whatever be the classification of public revenue, it should be remembered that the various activities of state are aimed at regulating the economy so that the resources are more productively used to maximise economic – social welfare of the people. As far as public revenue is concerned all the taxes as well as non-taxes are imposed to achieve two main objectives.

a) The state wants to get money for carrying out its function. This is the revenue objective.

b) And more important objective is to change the existing pattern of economic behaviour of the people. For instance, in order to discourage production (or consumption) of goods or services produced by private agencies government may impose a duty and in order to discourage the consumption of the goods or services performed by the state, government may impose a 'fee'.

15.10 BASIC CHARACTERSTICS OF TAX

In every economy there may be different kinds of taxes such as direct and indirect taxes, proportional and progressive taxes and so on. Some of the basic characteristics of a tax are given hereunder.

1. Compulsory Contribution:

On the basis of Seligman's definition of a tax, it is clear that a tax is compulsory contribution. It is the duty of every citizen to contribute something to the government for enabling the latter performing functions properly. The compulsory element of a tax has been a subject of controversy among some economists. For ex. It has been argued that a person can avoid payment of personal income tax by not increasing his earnings. Similarly indirect tax on goods & services can be avoided by not consuming them. Nevertheless, where a tax is to be paid legal, one cannot escape payment of it.

2.Sacrificing Nature:

Another feature of tax is that it involves some sacrifice on the part of the taxpayer. Whenever a person pays the tax, his income is reduced by the amount of tax. So the taxpayer undergoes some amount of sacrifice.

3.Defraying the cost of Public Revenue:

The government collects taxes to defray the cost of public services rendered in the common interests of the society.

4. No quid – pro quo

It can be said that a tax is not like a price paid to the good. It is also different from a fee. The basic feature of a tax is that there is no 'quid – pro quo' i.e., a direct return of benefit to the taxpayer.

5. Transfer of purchasing of Power.

Another feature, which we notice in the case of a tax, is that it is paid out of the income of the payer. So, whenever a tax is paid, there is a transfer of purchasing power from the taxpayer to the government.

15.11 CANONS OF TAXATION

A good tax system in order to achieve various objectives chooses and adheres to certain principles, which become its characteristics. A good tax system, therefore, is one, which is designed on the basis of an appropriate set of principles, such as equality and certainty. Keeping in view the fact that the objectives of taxation are conflicting and that a compromise will have to be made, the writers on public finance have generally chosen some of the important objectives and accordingly spelt out the necessary principles which a good tax system should adhere for achieving these objectives. In this connection Adamsmith gave us the most important set of principles, which he called the canons of taxation.

The four canons of taxation as prescribed by Adamsmith are the following:

1. Canon of Equity: " The subjects of every state ought to contribute towards the support of the government as nearly as possible in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state". This canon tries to observe the objective of economic justice. It dictates that in absolute terms the richer should pay more taxes because without the protection of the state they could not have earned and enjoyed that extra income. If we interpret this principle in terms of disutility, which the taxpayers suffer from by paying the taxes it follows that the tax should impose equal marginal disutility upon every taxpayer. Two possibilities emerge in this case. If incomes are subject to constant marginal utility then both the rich and the poor should be subjected to proportional taxation – each person paying a given percentage of his income as tax. On the other hand, if we agree with the more realistic proportion that income is subject to diminishing marginal utility then the richer should pay a larger proportion of their incomes as taxes.

2. Canon of Certainty : The tax payer should know with certainty the time of payment, mode of payment and amount of payment. So that he may adjust his expenditure in accordance with the residual income. On the other hand, government will be in a position to estimate the tax yield accurately and it can follow its financial programmes. In the words of Adamsmith " the tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment the quantity to be paid ought to be clear and plan to the contribution and to every other person". This canon helps to reduce waste, which is a characteristic feature of an uncertain tax system and avoids corruption.

3. Cannon of Convenience: The time, the mode and procedure of collecting tax should be convenient not only to the government but also to the taxpayer. Government should levy tax at the time when taxpayers hold cash in hand. Eg. In our country, land revenue conforms to the principle of convenience as it is paid in installments and after the harvest time. It would be more convenient if the government deducts income tax from monthly salary. Similarly if government collects tax on land or house at time when rent is to be paid by a cheque; the manner of payment is inconvenient. Smith says that" every tax ought to be levied at the time or in the manner in which it is most likely to be convenient for the contributor to pay it". Taxes on consumers are said to be convenient because consumer pays tax when purchases goods and in purchasing he chooses his own time. Payment here does not require special arrangements to pay taxes as he pays tax when buys the commodity.

4. Canon of Economy: This canon implies reduction in cost of collection and administration to a maximum levels as much as possible. The collection and administration require number of officers and other staffs. But the maintenance expenses of it and cost of collection should be low as possible. Otherwise unnecessary increase in the cost of collection or administration should be met by tax yield. This reduces public revenue and effects economic conditions adversely. Cost of collection should cause least public disadvantage to the taxpayer and to the country as whole. Adamsmith states that "every tax ought to be so contrived on both to take out and keep out of the pockets of the people as little as possible over and above which it brings into the public treasury of the state".

These canons of taxation have a sound philosophy behind them and exhibit an insight into the practical experience of tax administration and its effects. However, in view of the wide spread recognition of other objectives of the economic philosophy and problems of a modern state, a few additional principles were also suggested by Bastable. A brief description of these is as follows:

5. Canon of Productivity: It is also called the canon of fiscal adequacy. According to this principle, the tax system should be able to yield enough revenue for the treasury and the government should not be forced to resort to deficit financing.

6. Canon of Flexibility: It should be possible for the authorities without undue delay to revise the tax structure both with respect to its coverage and rates to suit the changing requirements of the economy and the treasury.

7. Canon of Simplicity: The tax system should be very simple. It must be very easy to administer and understand and breeds no problems in interpretation and legal disputes.

8. Canon of Elasticity: Tax system should be elastic so that government can increase its revenue in accordance to its financial needs and meet emergency expenses. Income tax is good example which conforms to this principle.

The tax system, which conforms to the above said canons, can be considered as a good tax system. But it is obvious that in no country each kind of tax satisfies each of these canons. Besides among these canons which receives more emphasis depends upon the economic conditions of the country, income of individuals and so on. Ex. In India population consists of large percentage of poor people and

the object of economic development. Under such conditions we cannot give prominence to the canon of equity. However the tax system as a whole should satisfy some of these principles.

15.12 MEANING OF PROGRESSIVE, PROPORTIONAL AND REGRESSIVE TAXES

Taxes are classified in many ways. One of the common classification of taxes is to divide them on the basis of degree of progression. A tax is called progressive when the tax liability increases more than the proportionate increase in the tax base. The tax base is the legal description of the variable or parameter to which the tax applies. Foe ex., in the case of personal income tax, the net income of an individual is taken as the tax base. Similarly for wealth taxation, the tax base is the value of property. In the case of progressive taxes, the tax liability as a proportion of tax base goes on increasing. If on the other hand, the tax liability decreases with the increase in the tax base, the taxes are termed as 'regressive'. Accordingly, therefore, if the tax rate remains unchanged whatever be the tax base, the tax is called 'proportional'.

Generally direct taxes are believed to posses progression. Where as indirect taxes are believed to have proportional tax rates. But it is possible to make even a indirect taxes at higher rates are imposed on such of those goods consumed by the rich and if the goods consumed by the poor are relatively taxed a little, such taxes do posses progression. On the other hand, if necessaries of which the poor consume the most ate taxed heavily such taxes are termed as ' regressive' to rich as well as the poor pay the same amount of tax for the same amount of consumption of the commodity or service. From this we can say that the sacrifice undergone by the poor is relatively more than that undergone by the rich. Therefore proportional taxes on essential items of consumption being regressive are not justified. In indirect taxes also as stand in the above example, if the effective tax falls as the tax base (income or wealth) increases, they are termed as 'regressive'. It is necessary to remove the regressive element of direct or indirect taxes by suitably changing the rate structure. But in practice it may not always be possible to avoid completely the regressive element in all taxes administered by the government.

Sometimes another term known as 'digressive taxation' is used to mean that there is declining degree of progression as the tax bas increases.

Normally digression could be seen in two ways. First, a certain amount of tax base is exempted from payment of tax while fore the remaining amount, an uniform tax rate schedule does not move up as fast as the tax base increases, we find second type of digression. In brief, therefore, we may state that taxes can be viewed as proportional, progressive and regressive in terms of their rate structure.

15.13 SUMMARY AND CONCLUSION

We find that there are many arguments as stated above in favour of and against proportional taxation. It may be stated that in the nineteenth century many writers favoured proportional taxation, which in the twentieth century the emphasis has shifted to favour progression. The basic question today is not one of proportional versus progressive taxation but rather one of moderate versus high rates of progression. In every tax system there is justification to have a proper mix of both proportional and progressive taxation. We have already learnt that tax is a compulsory levy by which public revenue is accrued to the state. The features of a tax system changes overtime. In this unit we have also discussed and tried to analyse the canons of taxation in general and for developing economies in particular. A good tax system should posses to some features, which are related to the objectives and principles of taxation. An attempt is also made here to analyse the features, objectives and canons of sound tax system.

15.14 SUGGESTED BOOKS

1. B.P. Thagi : Public Finance
2. Hugh Dalton : Principles of Public Finance
3. H.L.Bhatia : Public Finance
4. Musgrave : Theory of Public Finance

15.15 MODEL QUESTIONS

Answer the following questions:

1. What is meant by progressive taxation?
2. What do you mean by proportional taxation?
3. Explain regressive taxation?
4. Distinguish between progressive and proportional taxes?
5. Critically examine the canons of taxation?
6. What are the characteristics of a sound tax system?
7. What should be canons of taxation in developing countries?

Unit – 16 : THEORIES OF TAXATION - BENEFIT PRINCIPLE - ABILITY PRINCIPLE - SACRIFICE PRINCIPLE

STRUCTURE

16.0 Objectives

16.1 Introduction

16.2 Early Views: Benefit and ability to pay theories, Arguments for and against Benefit Theory, In terms of protection – Benefit theory, Marginal utility – Benefit Theory, Distribution aspects – Ability to pay theory approaches to taxation.

16.3 Benefit principle of Taxation.

16.4 Ability to pay and Subjective Tests.

16.4.1 Equal Absolute Sacrifice

16.4.2 Equal Proportional Sacrifice

16.4.3 Equal Marginal Sacrifice

16.5 Ability to pay and objective tests.

16.6 Property, Income, Expenditure / Summary

16.7 Suggested Books

16.8 Model Examination Questions

16.0 OBJECTIVES

The purpose of this unit is to discuss various principles of taxation. After reading the unit, you will be able to:

- Explain the benefit approach of taxation
- Analyse the cost of service principle of taxation
- Discuss the ability to pay principle of taxation and
- Identify the subjective and objective tests relating to ability to pay principle.

16.1 INTRODUCTION

Here we discuss about justice in taxation, which deals with how the tax liability has to be determined. We know that a tax is a compulsory contribution made by the person to the government and there is no direct quid pro quo. How the money burden of taxation is to be distributed? What principles should be followed to make the system more equitable? What is the relationship between the taxpayers and the government? Answers to the questions are found when we analyse various factors governing justice in taxation. There are many theories to explain as to how the tax burden is to be distributed. Broadly, we may study three theories namely ' the benefit theory or approach the cost of service theory' and the liability to the benefits received by the taxpayers from the goods and services supplied by the state. In the second theory, the tax liability is linked to the cost of providing the goods or services by the state. The third is the most important theory which links tax liability to the individuals capacity to pay tax.

16.2 EARLY VIEWS: BENEFIT AND ABILITY TO PAY THEORIES

As rightly pointed out by Musgrave, views on the principles of taxation may be found in the writings of innumerable authors, philosophers, economists and political thinkers right from the middle ages to date. The duty to pay taxes or the power to tax is among the most tangible of all links between subject and sovereign. As far as the benefit theory is concerned, the basic assumption is that there exists an exchequer or contract type of relationship between the tax payers and the state.

Arguments For and Against Benefit Theory

During the 17th and 18th centuries many economists and political thinkers thought that the taxa tion as a price for the services rendered by the state was a natural complement to the contract theory of

state. According to the benefit theory, members of the society who receive various goods and services from the state activities should contribute in proportion to the benefits received by them. So, J.S.Mill thought the relationship between the taxpayer and the state was on quid-pro-quo terms. If taxes are to be paid in proportion to the benefits derived from state services, it means that this theory does not attach importance to the problem of bringing about equitable distribution of income and wealth. Similarly it ignores the problems of growth and stabilisation by making use of tax policy. It concentrates mainly on how 'goods and services are supplied by the state and how they should be paid for by the members of the society who enjoy them'.

In Terms of Protection – Benefit Theory

Most of the earlier writers who supported the benefit principle argued in terms of protection. In other words state provides protection the life and property of the people. The general opinion was that the need for protection should be measured in proportion to income or wealth, which is protected by the state. Therefore, proportional taxation was favoured and the benefit principle was very much supported by them. Some writers like Roussean, Sismondi etc, did not subscribe to this viewpoint. For instance Roussean felt that the wealthy would benefit more from protection than the poor. Similarly, Sismondi was of the opinion that the need for protection increases more rapidly than income and hence argued for progressive taxation.

Marginal Utility – Benefit Theory

Some writers had taken 'marginal utility' concept to substantiate their argument in support of the benefit theory. For example, Mazzola opined that each consumer should be called upon to pay a price equal to the marginal utility that he personally derives from the service rendered by the state.

Another economist Emile Sax made a distinction between ' personal collective wants' and 'collective wants proper'. It is clear that the principle of exclusion applies to the former but not to the latter. No individual can be deprived off having the benefit of the state services. So, according to Sax, a good proxy to measure the relative benefit received by an individual would be the proportional income tax. Similarly, Knut Wicksell advocated that taxes should be imposed on the basis of voluntary and unanimous action of the individuals to have state services. If this view is implemented, the role of the tax system to bring about equitable distribution of income and wealth is ruled out. But to treat that state services should be consumed on the basis of voluntary demand is not correct much as there would not

generally be equitable distribution of income in the economy. Similarly Erik Lindahl also did not give importance to tax system, to bring about equitable distribution of income in the economy. He supported the benefit theory in terms of voluntary exchange between the taxes paid and the state services received by the tax payers on the basis of their preferences.

Distribution Aspects – Ability to Pay Theory

On the other hand, if we attach importance to the distribution aspects of the economy, we find that the ability to pay approach of taxation is more justified. This principle received a good deal of support from the socialist thinkers. Adamsmith in his canon of equity gave more importance to the ability to pay concept of taxation. Modern welfare states have also attached much importance to the ability to pay approach of taxation.

Approaches to Taxation

All this discussion amply reveals that broadly there are two approaches to taxation: namely whether taxes should be imposed in proportion to the benefits received from the state activities or whether taxes have to be paid in accordance with the tax payers capacity or ability to pay. If benefit approach is taken, there is quid-pro-quo relationship between the taxpayers and the state. Taxes would not be treated as compulsory payments. But if ability to pay approach is taken, taxes are to be considered as compulsory contributions to the public exchequer. In such a case, there is no quid-pro-quo element in taxation. We may now deal with the merits and demerits of those approaches.

16.3 BENEFIT PRINCIPLE OF TAXATION

As already discussed, this theory tells us that for the benefits conferred on the community through the various activities of the state, it is necessary and justified that the cost of the government services are made good by the members of the society in proportion to the benefits received by them.

Advantages of the Benefit Theory

The following are the merits of the benefit principle.

a. The theory is based on the assumption that there is justification to tax those who have benefited from the public services.

b. This theory gives importance to both the revenue and expenditure sides of the budget. When government provides certain goods and services, it involves the cost aspect or public expenditure side of the budget. When taxes are imposed on the community it relates to public revenue of the budget. The benefit theory determines not only the public expenditure side but also the relative tax shares that should be paid by the tax payers. In other words benefit theory simultaneously determines both the public services as well as tax shares.

c. The benefit theory is favoured on the ground that the theory it helps efficient allocation of resources.

d. The theory is applicable in respect of those cases where the benefit received can be measured. For example local property taxes to finance policy administration, special assessment to finance local public works etc.

Disadvantages of the Principle

Let us discuss the demerits of the benefit theory in a brief way.

a. At the outset, it may be seen that benefits derived individually cannot be accurately separated and measured. The functions of government are varied and complex. The community in general would be benefited from the various activities performed by the government. It is very difficult, rather impossible to calculate and assess the individual benefits so that each person should be called upon to contribute in proportion to the benefit received by him. So, there are many theoretical and practical difficulties to implement this principle.

b. The quid-pro-quo relationship between the tax payer and the government has been subjected to much criticism. In the past, writers on Public Finance thought that the relationship between the tax payer and the government was analogous to the satisfaction of private wants. Taxes are treated as spices. But many services provided by the government are meant to satisfy the collective wants. In modern times, state provides certain services for the welfare of the community in general but not for the welfare of an individual person. Therefore, quid-pro-quo type of exchange relationship does not exist between the state and the individuals with respect to most of the public services.

c. As the benefits cannot be separated on individual basis, taxation should be taken as a collective

instrument to finance various activities performed by the government. So it is not possible tax people in proportion to the benefits enjoyed them.

d. The benefit approach sometimes gives peculiar results. For example, if everyone has to pay to the government according to the benefits received, take the case of a pensioner, the amount of pension granted by the government to a retired employee is definite sum which represents the benefit received by him. If he asked to pay a sum equal to the pension by way of taxes, it is very ridiculous. So in practice we should not expect people to pay taxes proportionate to the benefits received.

e. If we follow the benefit approach, the burden of tax on the poor would be much more than the rich. In a welfare state, most of the public revenues are meant to benefit to the poor rather than the rich. Some public services may be common to all where exclusion principle would not be applicable. If the poor are called upon to pay taxes in proportion to the benefits enjoyed by them, it leads to regression. In other words, the benefit theory which supports proportional taxation is regressive in nature. J.S.Mill rejected the benefit theory because it would lead to regressive taxation.

f. As already stated this principle does not attach importance to the problems of distribution and stabilisation. In modern days distribution and stabilisation aspects are very essential to be looked upon in development planning point of view.

g. It may be seen that benefit theory has very limited application. When a special or direct service is provided by the state, it may perhaps be possible to calculate the individual benefits and people can be asked to pay taxes in proportion to the benefits received by them. A direct service provided by the government should be run on commercial lines, if at all the benfit principle can be made applicable. But most of the activities of a welfare state are not performed on commercial lines. So, to treat all taxes in the economy on the basis of the benefit principle is illogical.

Cost of Service Principle of Taxation

This principle is closely associated with the benefit theory. While in the benefit theory, taxes should be paid in proportion to the individual benefits derived from various state services, the cost of service theory attaches importance to the cost of rendering the service to the tax payers. The state is considered just like a seller in the market. The cost of the good or service supplied by the state should be realised by way of taxation from those people who utilise the same. According to this theory the citizens are not entitled to any benefits from the state. If at all anybody receives a benefit, he should pay its cost.

The theory does not attach importance to the productive and welfare functions of the state. Nor does it concern with the problems of income distribution. The theory implies a balanced budget policy. If this theory is implemented, quite a few sources of public revenue does not find place in taxation. For example taxes on windfall gains, capital gains, unearned investment, inheritance and gifts etc. As the individual has to pay the cost of the service supported by the state, this theory rules out all sorts of welfare activities also.

Just like the benefit theory, even the cost of service principle also cannot be actually put into practice. The problem of measuring the cost of state services and assigning them to various beneficiaries is a very difficult task.

State may be supplying quite a few services to which the exclusion principle cannot be applied as in the case of private goods. All the members of the society are entitled to benefit from the state services. In other words one cannot be denied a share in the consumption of public goods and therefore the cost of service cannot be apportioned between different members of the society.

Another objection to the cost of service approach is that it is not possible to calculate the cost with enough conceptual clarity. For ex. If the resources were used inefficiently, the cost of the service provided by the state would naturally be higher. It is not justified that the consumers be asked to pay by way of taxes even for the inefficiency in production.

Similarly, this theory is inadequate to explain the problem of externalities. Social benefits and social costs on account of externalities. This theory is applicable if the state confines itself to only the commercial cases just like the private entrepreneurs. But this view is not correct. While determining the tax liability, the state is supposed to estimate the net social cost.

Finally, a very serious question concerning this theory is as to what extent and nature the state services are to be provided. It is not proper to think that the state itself decides what services are to be provided to the citizens who would be called upon to pay for them. How to ascertain the preferences of the citizens for the state services. There are many practical difficulties in ascertaining the true preferences of the people for the state services.

Although the above said drawbacks are there in this theory, yet it may be useful in some limited number of cases where a service is specially provided, it is possible for the state to recover its cost from its beneficiaries. Foe ex., the charges for water supply, railways etc. But by and large this principle is inappropriate to determine justice in taxation. Many services like free education or medical aid for the poor cannot be explained on the basis of this theory. Also, it may be noted that this principle goes against

the very definition of tax, as we know that a tax is a compulsory payment without quid-pro-quo. This principle is not in accordance with character of a tax, viz., quid-pro-quo. But according to this theory, the payment of a tax is in return of the cost of the service.

Check Your Progress

1. What is the principle of cost of service of taxation?

2. What is the benefit approach of taxation?

Principle of Ability to Pay of Taxation

a. The Principle

Unlike the benefit theory or the cost of service theory, this approach is completely in accordance with the definition of tax. The theory does not assume quid-pro-quo relationship between the citizens and state. In other words, there is no any commercial or semi commercial relationship between the state and the citizens. It is the collective responsibility of the citizens to pay taxes to the government without direct quid-pro-quo. The 'ability to pay' doctrine items from the idea that the burden of taxation should be shared among the members of the society so as to uphold the principle of justice and equity. This theory tells us that taxes should be levied according to the ability of tax payers. Adam Smith embodied this principle while explaining his canon of equity, which state " the subjects of every state ought to contribute towards the support of the government as much as possible according to their respective abilities.

As rightly opined by Musgrave and Musgrave the application of the benefit principle was very much limited to certain specific government functions only and therefore, was not useful to explain the

general problem of tax structure. The redistributive function of the tax payers process could not be explained by the benefit theory. So, in order to achieve equitable taxation, people should contribute to the cost of government in proportion to their respective abilities to pay.

b. Merits

Ability to pay approach has been supported in the terms of what is known as 'sacrifice interpretation of ability'. As the concept of sacrifice being subjective, different formulations have been suggested to measure one's ability in terms of sacrifice. Broadly, there are three interpretations of sacrifice namely:

(i) Equal Sacrifice

(ii) Proportional Sacrifice

(iii) Minimum Sacrifice

In sacrifice terms, the rich are justified to bear more burden of taxation. This principle is justified on the basis of diminishing marginal utility as applied to income. When we move up the income scale, the utility of marginal income is assumed to be declining. So, it is justified that the rich should bear tax burden more proportionately than the poor.

The ability to pay principle is often justified on the basis of what is known as 'Faculty'. After meeting certain basic needs, more resources are left at the disposal of a rich man compared to that of a poor man. So it is justified that the rich should bear greater burden of taxation rather than the poor.

A careful look at the above three grounds advanced in support of 'ability to pay' principle amply reveals that they are, strictly speaking, not realistic. The main difficulty is on account of the very nature that sacrifice or marginal utility of income being subjective.

16.4 ABILITY TO PAY AND SUBJECTIVE TESTS

Since the time of J.S.Mill, the ability to pay principle has been viewed in terms of equal sacrifice. On the assumption that the income utility schedule is the same for all tax payers, it is justified that people with equal income i.e. equal ability to pay should contribute equal amounts of tax. While understanding the principle of equity, there are two situations namely Horizontal and Vertical equity which we should know. Equal taxes for a person in equal positions is referred to as Horizontal equity, while unequal taxes for a person with unequal income is referred to as Vertical equity. Of the two, horizontal equity is less controversial. If equality is to be interpreted not in terms of equal loss of income but in terms of equal loss

of utility, then equal treatment calls for unequal taxes for unequal incomes. Horizontal equality is met if we make two important assumptions, namely:

a. That income utility is measurable in cardinal terms

b. That the income utility schedule is the same for all people. But how about meeting the requirements of vertical equity, the answer to this question depends on both the shape of the income utility schedule and by what role "equality of sacrifice" is defined. As stated already, equal sacrifice can be interpreted in terms of:

(i) Equal absolute sacrifice

(ii) Equal proportional sacrifice

(iii) Equal marginal sacrifice. According to Dalton there is a fourth possible interpretation of equality of sacrifice. He calls it as 'constant equality of incomes'. It means that the relative income position among the tax payers should remain the same before and after payment of tax. The most ticklish aspect is how to measure the marginal utility of income when the income of a tax payer changes. Still more difficult is to make interpersonal comparisons of marginal utility of income, the assumption of similarity of income utility schedules among the tax payers has been accepted to analyse the different interpretations of equal sacrifice. We now discuss the above three interpretation of sacrifice.

16.4.1 EQUAL ABSOLUTE SACRIFICE

This interpretation of sacrifice tells us that the loss of utility is the same among different tax payers. If this doctrine is applied, each member of the society will have to pay same amount towards tax and nobody would be exempted. However the amount of tax varies among the tax payers with different incomes since the marginal utility of income depends upon the income level. For instance, let us suppose that there are two tax payers with different incomes. The person with less income pays less tax. But the sacrifice or loss of utility would be the same to both as a result of the tax.

16.4.2 EQUAL PROPORTIONAL SACRIFICE

It means that the loss of utility as a result of a tax should be proportional to the total income of tax payers. In this principle, the ratio of sacrifice of each tax payer to his total income should be one and be the same among all the tax payers. Although people with higher incomes would pay more amounts towards tax, the ratio of sacrifice to the total income would be same for all. The principle of equal proportional sacrifice can be shown as follows:

Let us suppose that satisfaction is measured in terms of income possessed by different individuals, say, A, B, etc.

$$\frac{\text{Sacrifice of Tax payer A}}{\text{Income of A}} = \frac{\text{Sacrifice of Tax payer B}}{\text{Income of B}}$$

It is clear from the above formula that each tax payer under this principle undergoes sacrifice equal to the same percentage of his total satisfaction. What would be rate structure of equal proportional sacrifice principle is adopted, if the marginal utility of income falls, it is necessary to know these relative percentage shifts in the marginal and average utilities. If the rate of fall of both marginal and average utilities is the same, then proportional tax would satisfy this principle. If on the other hand, the marginal utility of income falls at a faster rate than its average utility, progressive taxation is called for to satisfy this objective. Similarly if the marginal utility of the income falls at a smaller rate than its average utility, regressive taxation would be necessary to fulfill this principle.

16.4.3 EQUAL MARGINAL SACRIFICE

Another interpretation of equality is given by the equal marginal sacrifice. This means that the tax burden should be borne in such a manner that the marginal sacrifice of each tax payer would be the same. This principle is given importance the welfare point of view. If marginal sacrifice is equal among tax payers the total sacrifice of the community would be the least or minimum.

The equal marginal sacrifice principle is more attributed as an efficiency rule rather than an equity rule. Edgeworth and Pigou supported this principle so that the loss of welfare for the community as whole is minimised. In this context it is more appropriate to interpret the three versions of sacrifice in the words of Dalton. " According to the principle of equal sacrifice, the direct money burden of taxation should be so distributed that the direct real burden on all tax payers is equal; (ii) According to the principle of proportional sacrifice the direct real burden on energy tax payer is proportionate to the economic welfare which he derives from his income; (iii) According to the principle of minimum sacrifice, total direct real burden on the tax payers as a whole is as small as possible"

Of all the three types of sacrifice, the principle of equi marginal sacrifice has been widely accepted. In this context, it is very essential for us to remember that 'sacrifice' itself is subjective concept and we are not sure of estimating correctly the shape of the marginal utility of income curve. Ability to pay,

expressed in terms of sacrifice is not free from arbitrariness and ambiguity. So the need to state the ability to pay in terms of certain objective criteria arises.

Check Your Progress – II

3. What do you mean by ability to pay?

4. Interpret one of the equal sacrifices

16.5 ABILITY TO PAY AND OBJECTIVE TESTS

One must know the right index of ability to pay. In olden days the term ability or faculty in the Elizabettan Poor law refereed to 'property'. So the persons who possesses more property are supposed to have more ability to pay. But in course of time as the society advanced, the emphasis has been shifted from property to income. In recent times, some economists have advocated consumption as an index of one's ability to pay.

We shall now discuss the implication of each one of them.

Property

If property is taken as the basis of one's ability to pay, there are some weaknesses. Although a person may be earning substantial income, he may not possess property. He may not come under the property taxation. Some properties may not be yielding current income. For instance the ability to pay of a man with an annual income of Rs.10 lakhs is much more than that of widow who possesses a house but not earning any current income at all. So, property sometimes may not represent one's ability to pay.

Income

Income is regarded as a fair test of ability to pay in modern times. Therefore, many economists favoured progressive taxation of income so that the rich may contribute more to the exchequer by way of taxes rather than the poor. By considering income as index of one's ability to pay, there is possibility of including income from all sources. In other words income from salaries, property, investment, shares and debentures etc, could be taxed. But according to some thinkers income cannot always represent a fair test of ability to pay. Let us know the reasons.

(a) It is necessary to differentiate between earned and unearned income. It is necessary for us to know whether the income is obtained from the property,or from one's personal effort. The former should be taxed at a higher rate rather than the latter type of income in order to make taxation more equitable.

(b) The family circumstances also have to be taken care of. A family may earn more income but the number of dependents also may be quite large. So, a bachelor may be taxed at a higher rate than a married person with a number of children.

(c) All income should not be taxed. It is necessary to have a minimum exception limit, which should be determined by the current standard of the community.

(d) The principle of progression is normally applied if income is taken as the basis of taxation. But we know that there is very much arbitrariness in the formulation of rate structure of progressive taxation.

Despite these limitations, income is regarded as the best index of 'ability to pay' for the purposes of taxation in many countries in the world.

Expenditure

More recently, Prof.Kaldor, an eminent economist, favoured expenditure as the basis of taxation. According to him income as the test of ability to pay is defective. He feels that one's spending power is the true index of ability to pay. As income tax is not imposed on the basis of one's true ability to pay and as it leads to corruption and tax evasion etc., he feels that income should not be taken as the basis of taxation. Income tax adversely affects incentives to work and save and thus discourages private capital formation. So, Kaldor favoured consumption as the basis of taxation.

But some economists feel that to take consumption, as one's ability to pay is not correct. Taxes on consumption hit the poor more than the rich. They are generally regressive taxes. A person may be spending more due to his family circumstances although his income may be low. So to conclude that he has a greater capacity to pay taxes is not correct.

16.6 SUMMARY

We have seen that the three objective tests to represent one's ability to pay are not free from defects.

Therefore the right way is to have a tax system which gives representation of various taxes imposed on property, income and consumption. In such a case it is possible to attain near approximation of satisfying the principle of equality in taxation. Therefore, modern tax system includes taxes on income, property and consumption. It may be noted that the burden of taxation should be judged taking the system as a whole but not on the basis of individual taxes. Some taxes may not conform to the principle of equity. But the inequity of one of one tax can be got corrected by the equity of some other taxes.

Different people have different ideas regarding what constitutes equity in taxation. It is a concept, which is very difficult to put into practice. Therefore Dalton is right when he say's "Equity is an elusive mistress whom perhaps it is only worth the whole of philosophers to pursue ardently and of politicians to watch wally"

16. 7 SUGGESTED BOOKS

1. B.P.Thagi : Public Finance
2. Hugh Dalton : Principles of Public Finance
3. H.L.Bhatia : Public Finance
4. Musgrave : Public Finance

16.9 MODEL QUESTIONS

Answer the following questions

1. Explain critically the benefit principle of taxation
2. Describe the principle of ability to pay?
3. Analyse the subjective and objective tests of the principle of ability to pay
4. Explain in brief the two approaches of taxation
5. Discuss the cost of service principle of taxation
6. Explain the concept of " equality of sacrifice"
7. What are the three objective tests of 'ability to pay' theory

NOTES

Unit – 17: THEORY OF OPTIMAL TAXATAION – EXCESS BURDEN OF TAX – EQUITY AND EFFICIENCY

STRUCTURE

17.0 Objectives

17.1 Introduction

17.2 The theory of optimal taxation

17.3 Concepts of Tax burden

17.4 Nature of Tax burden

17.4.1 The Marshallian analysis

17.5 The principle of equity

17.6 Conflicts between equity and efficiency

17.6.1 Trade off between equity and efficiency

17.7 Principle of certainty

17.8 Principle of administrative efficiency

17.8.1 A Neutral tax

17.9 Distribution of Tax burden

17.10 Progressive, Proportional and Regressive distribution of incidence

17.11 Limitations of Tax burden

17.12 Optimal income tax rates

17.13 Summary / Conclusion

17.14 Suggested Books

17.15 Model Examination Questions

17.0 OBJECTIVES

This unit aims to explain the meaning of tax burden, the various concepts and measurements of it.

After reading the unit you will be able to:

- Identify the concepts of tax burden
- Recognise the components of the burden
- Explain the process of measuring tax burden
- Discuss the distribution effects of tax burden
- Analyse optimum taxation for the attainment of optimum economic welfare
- List the limitations of tax burden.

17.1 INTRODUCTION

Here we make an attempt to understand the meaning of 'Tax Burden' and 'Concept of optimum taxation' and other concepts associated with it and the problems involved in its measurement. Now we shall discuss the difference between incidence of tax and burden of tax. In the literature on taxation, some writers had used these two terms interchangeably, while some others made a distinction between them. According to Pechman and others, the two terms mean the same while according to writers like J.F.Due, the term burden of tax incidence of tax refers to the distributional aspect of tax burden. On the basis of the distributional aspect of tax burden, it is possible to find out whether a tax is regressive, proportional or progressive with respect to either income or consumption, taken as the tax base. We have already discussed regressive, proportional or progressive taxation with reference to the rate and base structure of a tax. Now, these terms viz., regressive, proportional or progressives are explained with reference to the distribution of tax burden.

17.2 THE THEORY OF OPTIMAL TAXATION

If the tax structure is to facilitate the attainment of the goal of maximising per capita real income, it must be designed in such a way as to avoid excess burdens on the one hand and to give maximum incentive to changes in economic behaviour that increase real income on the other. By excess burden is meant reduction in private sector real incomes caused by taxes over and above those required to make resources available for governmental sector production.

In the context of optimum taxation for the attainment of optimum economic welfare, the following three goals are considered to be important.

a. Maximum freedom of choice, consistant with the welfare of others;
b. Optimum standards of living in terms of available resources and techniques and in the light of consumer and factor owner preference;
c. A distribution of income currently acceptable to society.

Special tax on this product designed to reduce consumption and production to optimum levels is justifiable in terms of the goal of optimum adjustment of production.

It is evident that in several cases, taxes may have unneutral economic effects. A tax imposed on the production or sale of one commodity but not on another is capable of creating unneutral effects by altering consumer choices or by altering the relative desirability of work and leisure or by altering the choice of methods of production. In other words, specific taxes by distorting choices and preferences cause excess burden.

17.3 CONCEPTS OF TAX BURDEN

According to Dalton, tax burden can be either in the form of money burden or real burden. The amount of tax paid in the form of money to the exchequer is the extent of direct money burden. Similarly, the direct real burden is represented by sacrifice of economic well being undergone by the tax payer. It can be seen that the former comes under the incidence of tax while the latter relates to the effects of it. Some time a distinction is made between indirect money burden and indirect real burden also. An example can make the point clear. When a tax is imposed it is first collected, say from the distributor of the product who ultimately shifts the money burden on to the consumers. But normally some time would elapse between the payment of tax by him to the state and its relationship from the consumers. During this period, there may be loss of interest on the amount of tax who first paid the tax on the state. This loss of interest sometimes attributed as indirect money burden. If the interest could be calculated in advance, the distributor (in the present example) may pass on even this amount also to the consumers, by way of increase in the price of the commodity.

Direct real burden is the loss of economic welfare undergone by the tax payer; while indirect

real burden is the loss of economic welfare undergone by the people who are forced to buy less the commodity due to imposition of tax. Whether the people buy less or not, however, depends on the elasticities of demand.

According to Mts.Ursula Hicks, there are two terms namely:

a. Formal incidence

b. Effective incidence

Formal incidence refers to the distribution of money burden of tax by different income groups. Effective incidence deals the tax payers reaction to a change of tax and its consequences. So, it compares two sets of economic situations, namely one with tax and the other without tax. In the words of Mrs.Hicks "In order to discover the full economic consequences of a tax, we have to draw and compare two pictures – one of the economic set up (distribution of consumers wants and incomes and allocation of factors) as it is with the tax in question in operation; the other of a similar economic set up but without the tax".

Another eminent writer on public finance, R.A.Musgrave explains the burden of tax in terms of distributional charges in income under three concepts of incidence. They are namely: a. Specific or Absolute incidence b. Differential incidence c. Budget incidence. Under specific or absolute incidence, the distributional effects of income are measured due to imposition of tax. Under differential incidence, the difference in the distributional results of two tax polices yielding the same tax revenue in real terms has been analysed. Budget incidence refers to the distribution effects of income on account of the combined influence of tax and public expenditure. In other words, budget incidence takes into account not only the tax burdens but the benefits of public expenditure also, according to the people in an economy.

All this tells us that different writers had viewed the problem of tax burden in different ways.

Check Your Progress – I

1. Identify the following concepts of the burden:

a. Money burden b. Real burden c. Formal incidence d. Effective incidence

e. Specfic or absolute incidence f. Differential incidence g. Budget incidence

17.4 NATURE OF TAX BURDEN

According to R.A.Musgrave, there are four possible components of the burden of tax. They are:

a. Resource transfer

b. Excess burden

c. Output effects

d. Employment effects.

In analysing tax burdens, it is necessary to understand whether the total burden is equal to the tax revenue collected.

In the first category namely ' resource transfer' the burden is measured by changes in the resource available at the disposal of the private sector. To the extent resources are transferred from private use to public use due to imposition of a tax, the burden is equal to the tax revenue raised by the government.

In the second category, namely 'excess burden' a situation is conceived where due to imposition of tax consumers choice, what would be the position. (It of course depends upon the elasticity of demand for automobiles) but for convenience sake, let us suppose that consumers choice is affected, then some one may forego the purchase of a car because of the tax payable. He does not pay tax but even then his budget choice is less satisfactory than it was before. This may be the case with respect to some consumers but not all consumers. Therefore, although government could get certain amount by way of tax on automobiles, it must have affected the consumers choice for some and to that extent, it results in 'excess burden'. According to Musgrave, excess burden is interpreted in terms of efficiency cost also. For

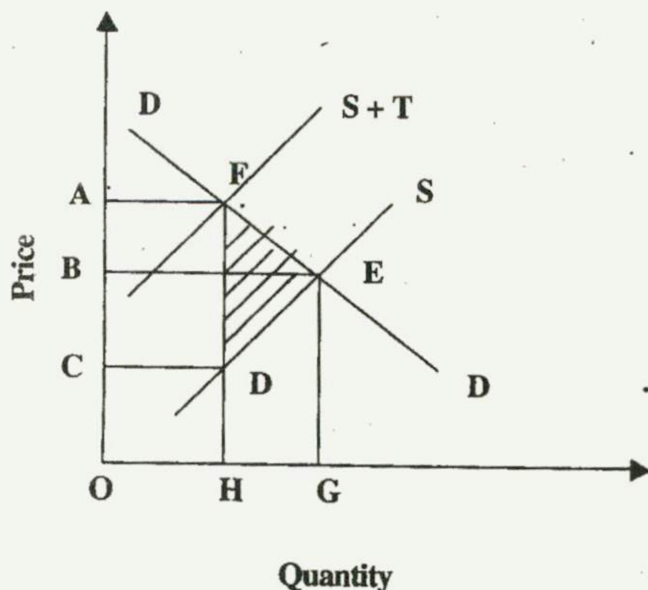
instance, if due to imposition of a tax, let us suppose that private sectors economic decisions are distorted. If it results in loss of welfare it is termed as 'excess burden'. In the words of Musgrave " excess burden is the difference between the total loss of welfare (or the economic cost) of a tax as it is actually imposed and the loss which would result if the same tax revenue had been collected without distorting economic decisions in the private sector". In other words, a neutral tax conceptually is the one, which does not result in 'excess burden'. But tax neutrality is rather difficult to be achieved in actual practice.

In the third category, namely 'output effects' we may conceive a situation where imposition of tax must have resulted in changes in the level of aggregated demand and unemployment. When a tax is imposed, it may result in reducing the level of employment may likely increase.

All the above four types of tax burden may interact each other and finally, the burden is measured by changes in distribution of income.

17.4.1 THE MARSHALLIAN ANALYSIS

Marshallian cardinal utility approach is the simplest demonstration of the excess burden doctrine. In the below diagram market is an equilibrium and E with output OG selling at a price of OB per unit in the absence of taxation.



Quantity

Let us now assume, that a specific tax at the rate of FD per unit is levied on this commodity. The

supply curve, including the tax, is S + T. Market equilibrium in the post tax situation is established at F. Output is now smaller at OH and price is higher at OA. Revenue from the tax is given by the area AFDC. Loss of consumers surplus as a result of the tax is represented by the area ABEF. Loss of producers surplus on account of the tax is equal to area BCDE. The total loss of surplus AFEDC (ABEF + BCDE) is greater than tax burden over and above what tax payers pay the government as tax revenue. It was first discovered by Dupuit. This burden results from the distortion of consumer choice between the taxed commodity and other goods. It must be noted that the excess burden varies with the elasticity of demand for the commodity. Largest excess burden results in the case of perfectly elastic demand, while there will be no excess burden in the case of zero elasticity (completely inelastic demand) " In fact, the taxation of goods which does not show any demand elasticity (and so no excess burden) will be the same in effect as an income tax raising the same amount of revenue but without reference to expenditure pattern".

17.5 THE PRINCIPLE OF EQUITY

Equity is perhaps the most important principle of taxation. It is ethically desirable that taxes should be equitable. There is the practical needs too that taxes should be acceptable to the tax payers. The natural corollary of inequitable is wide spread evasion. It may even cause revolution.

Equity is generally divided into a. Horizontal equity b. Vertical equity.
Horizontal equity refers to the distribution of taxes among people considered equals. A condition of perfect horizontal equality can be said exist when a tax or tax structure can be described as achieving an "equal tax treatment of equals", i.e. horizontal equity requires that people who are deemed to be in an equal economic position should pay the same amount in taxes. The significance of this rather straight forward criterion should not be underestimated. Adherence to it provides a basic protection against discriminatory activity of government. By focussing on people's economic feature, the chance of grouping them by their geographic region or by their race is reduced. Horizontal equity represents an application of ethical value judgement that is pleasing to those who accept democratic as opposed to authoritarian principles of government. If the ethical guideline stopped here, however, or perhaps every citizen would pay the same tax. Fairness in taxation must also cope with the idea that we do not all fit in one economic group. Vertical equity, therefore, requires an acceptable pattern of tax payments among people deemed to be unequal unanimity of thought will not exist on what people believe to be an acceptable

vertical distribution of tax burdens, but this does not mean that all vertical distributions are equally desirable. Income taxes designed to take a greater percent of poor people's income than rich people's income are not likely to attract wide support and neither would a tax system that attempted to completely confiscate the wealth of our most productive citizens.

17.6 CONFLICTS BETWEEN EQUITY AND EFFICIENCY

A reasonabie rule in designing the revenue system would appear to be that of minimising the secondary costs of financing any particular level of government activity. In other words, the revenue system should be such as to minimise the excess burden. But minimisation of secondary costs may conflict with equity, stated differently, efficiency in revenue collection may conflict with equity.

For example a lump sum tax is neutral and would therefore, cause minimum excess burden. In addition, it would be relatively easy tax to administer enforce and comply with. However, in the judgement of many it would not be equitable. It would not distribute costs according to ability to pay. Moreover, a lump sum tax or a head tax is regressive in effects.

Similarly, whle taxes on inelasticity demand and inelasticity suppled products and factors cause no excess burden, such taxes usually are not equitable by either benefit received or ability to pay criteria.

17.6.1 TRADE OFF BETWEEN EQUITY AND EFFICIENCY

Equitable tax is of two types, the one on saving can be avoided by replacing the general income tax with a tag on consumption and another on leisure can be avoided by replacing the consumption tax by head tax. But, These solutions interfere with considerations of equity. Thus choice must be made between equity and avoidance of excess burden. Society must ask itself what price in terms of excess burden, it wishes to pay to secure certain equity objectives. However Prof. Musgrave suggested that the " the trade off between equity and cost considerations should be pushed to the point where the gain is matched by the price of increased administrative compliance and efficiency costs. At the same time, any given level of equity should be purchased at least cost. Among equally equitable taxes those should be chosen which carry the least efficiency, administrative and compliance costs.

17.7 PRICIPLE OF CERTAINTY

This principle is employed to assess the certainty with which the government can look forward to

the revenue, which accrues to it. Four main aspects of certainty can be classified.

a. Certainty of Incidence: It is concerned with the certainty with which tax authorities can predict the effective incidence of taxes. This requires the exact knowledge about the shifting of a tax. The government must know whether a particular tax is shifted backward or forward or is borne by the tax payer himself. Without this information the impact of a fiscal action can not be known with certainty.

b. Certainty of Liability: It is concerned with the case and certainty with which tax liability can be to know his liability to a tax.

c. Evasion Ratio: The extent of evasion gives an idea of the revenue that the authorities can hope to get from a tax. Income tax offers large scope for evasion.

d. Fiscal Marksmanship: It deals with certainty with which the government can know before hand the revenue that will fall due to be paid in a particular year. This depends on the ability of authorities to forecast the values of tax bases. Certainty of income tax revenue, for instance depends on the accuracy of forecast about income while tax revenue from motor duties on the forecast about car ownership.

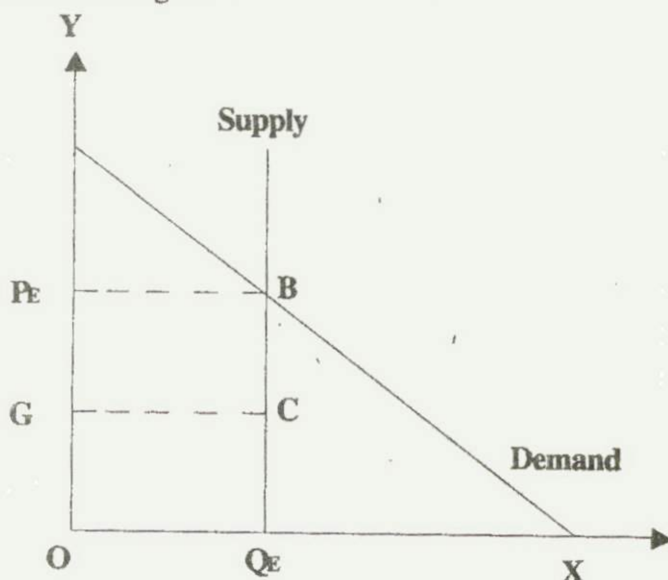
17.8 PRINCIPLE OF ADMINISTRATIVE EFFICIENCY

This principle pertains to the cost of tax collection. We find that the cost of collection is generally not high. But it is important to note that collection expenses include not only the amount spent by the tax collecting authorities but also the time spent by tax payers as well as expenses over tax lawyers and accountants. In this event, cost of revenue collection may become considerable.

17.8.1 A NEUTRAL TAX

A tax that does not distort people's market choice is called a neutral tax. The following diagram illustrates tax neutrality by considering the interaction of supply and demand in a hypothetical market. Let's look closely at the characteristics of the demand and supply curves displayed. The demand curve AH is normal downward sloping demand curve, the supply curve however is vertical i.e. it has price elasticity of 0. The equilibrium price in this market would be PE and the equilibrium quantity would be

QE. The question now is what will happen to the equilibrium price and quantity if we introduce a tax on the item referred to in the figure.



The answer is that there will be no change. The amount of the item that people will be willing to buy at different prices is given by the demand curve AH, and this will not change because of the tax. Buyers know how much they wish to spend for an item, but they are indifferent to who receives the money whether it is the merchant or the tax collector. In this case, the tax cannot affect the quantity supplied. Supply has a price elasticity of O. The quantity supplied is fixed, it is invariant to price. Thus we have a situation in which a tax will have no effect on PE or QE and therefore, have no unwanted side effects. In this figure QE amount of the item is sold at a price of PE. Thus OPE, BQE represents the total gross receipts associated with the item. A tax which took 50 % OPE, BQE would have no effect on PE or QE. Some might argue that not be fair, but there can be no complaint that such a tax would have unwanted side effects. Since the price of the item has not been changed in relation to competing or complementary goods, there is no reason to belive that consumer choice would be distorted by the tax.

While analysing the diagram, it helps us to appreciate why land taxation has been a favourite reform suggested by economists. Land is the factor of production whose supply is perfectly in elastic in the long run as well as in the short run. Taxing land cannot reduce its supply; neither will a tax on land change its productivity and therefore, the demand for it.

Check Your Progress – II

What are the components of the burden of tax?

17.9 DISTRIBUTION OF TAX BURDEN

The distribution of tax burden depends on assumptions made regarding the incidence of various taxes. For instance, it may be assumed that the corporation tax falls on the shareholders. Some may assume that it must have been shifted partly under certain conditions. Similarly, it may be assumed that sales tax or excise duties may fall on the consumers in proportion to their consumption. On the basis of incidence assumption, the burden distribution can be calculated. The distribution of tax burden can be done either by various consumers expenditure classes. The burden of direct taxes like the income tax, wealth tax, corporation tax etc, cannot be distributed on the basis of consumer expenditure. So, if we are interested to know the distribution of tax burden, the appropriate way of doing it would be on the basis of 'income' classes rather than on the basis of 'consumer expenditure' classes. The following table gives a set of incidence assumptions made in analysing tax burden.

Incidence Assumption

Sl. No	Description of tax	Incidence Assumption	Allocation made according to
1	Personal Income tax	Stays with the payer	Tax payments consumption of various commodities
2	Excise and Sales Tax	Shifted to consumer	Consumption of various commodities
3	Corporation Income Tax	Stays partly with share holders and partly shifted to consumers	In proportion to ownership of shares and in proportional to consumption

In the above table, we have given some incidence assumptions to certain important taxes. If personal income tax is assumed to be staying with the person, who pays the tax to the government, the burden distribution is made in proportion to the tax payments made by different households belonging to different income classes. Similarly, if we assume that excise and sales taxes (the most important indirect taxes) are shifted fully to the consumers, the burden distribution is on the basis of consumption of various commodities, as which these taxes have been imposed. Some people held the view that corporation income tax partly stays with shareholders and the remaining is shifted part in proportion to consumption.

The burden of tax can be expressed as a percent of total household income or as a percent of household consumer expenditure. Of the two, it is better to express it as a percent of household income.

Check your Progress – III

3. Explain the tax burden under absolute tax incidence

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4. How distributional changes in income is affected by differential tax incidence?

17.10 PROGRESSIVE, PROPORTIONAL AND REGRESSIVE DISTRIBUTION TAX INCIDENCE

Having distributed the tax payments of various income, classes, it is necessary for us to know whether any of the taxes or the tax system as a whole is proportionally, progressive or regressive. In our previous discussion, proportional, progressive and regressive taxation, we had stated these terms keeping in view only the tax structure. But, here whether tax is progressive, proportional or regressive is considered with reference to the distribution of tax burden. In a way, this type of interpretation is more meaningful rather than simply looking at the rate structure and classifying the taxes as progressive, proportional or regressive. We present a hypothetical table to make this point clear.

Distribution of Tax Burden by Income Class (as a percent of household income)

Description of Tax	0 - 1000	1001- 2000	2001- 4000	4001- 10,000	10,001 – 20,000
1. General Sales Tax	2.7	3.0	3.3	3.0	2.2
2. Excise Duties	3.0	3.4	3.6	4.2	5.8
3. Income Tax	-	0.1	0.3	0.2	0.1

In the above table, we examine the general sales tax, the burden distribution is progressive up to the income class of Rs. 2001-4000. But beyond this income class, the more the household income, the lesser is the burden of tax as reflects in the falling percentages. So we may say that burden distribution is regressive beyond the household income of Rs.2001-4000. In the case of excise duties, the burden distribution is progressive. If the same percentage is paid towards taxes by all the households the tax system may be stated to be proportional.

17.11 LIMITATIONS OF TAX BURDEN

There are many limitations while analysing the tax burden distribution:

a. We must have a distribution of income by size before new taxes are imposed or changes in existing taxes are brought out. Such information is not adequately available for many countries.

b. The allocation off tax payments across the various brackets are done on the basis of incidence hypothesis. So, if the incidence hypothesis is altered, there is every possibility of getting a different picture of the distributional effects of the tax. For instance if one assumes that corporation income tax is not shifted, then the entire tax has to be distributed among shareholders of various income classes only. Instead, if a portion of it is assumed to have been shifted the distributional impact would be different.

c. Distributional effects would be different if we want to find out under a differntial incidence instead of 'absolute incidence' hypothesis.

d. There are many difficulties in allowing the expenditure benefits by different income classes. Therefore, most of the studies on tax burden ignore the effects of public expenditure. This is, strictly speaking, not correct in so far as estimating the distribution of net tax burdens among different income classes is concerned.

17.12 OPTIMAL INCOME TAX RATES

When the government collects a given amount of revenue, it may withdraw the sum from taxpayers at various points in the income tax scale, a more progressive distribution will have the disadvantages of calling for heavier excess burden; and it has the advantage of distribution of burden of taxation according to ability to pay of leaving income where society considers it marginal utility to higher. The problem of construction of an optimal rate schedule essentially is to balance these two factors at the marginal thereby minimising the total burden. To put it more generally, the problem may be viewed as one of designing a set of negative and positive income tax rates which secure on optimal solution, allowing for both equity and efficiency. The goal may be to maximise the utility of individuals at the bottom of the scale.

It may be concluded that no hard and fast rules can be drawn. The 'optimal mix' of commodity taxes, defined as that which minimises excess burden would comprise a complex set of taxes and rates and even then the outcome would be second best to hypothetical tax under which leisure could be included in the base.

17.13 SUMMARY

Despite these limitations, a study on tax burden distribution clearly tells us whether a particular tax or the tax system as whole is regressive, proportional or progressive. If the tax system is progressive most of the objectives like reduction of inequalities of income and wealth etc., could be achieved. As the distribution of income is not only affected by tax and expenditure changes but by other decisions taken by the private sector as well, it is necessary that system should be periodically reviewed of its progressiveness or otherwise. If the tax structure is to facilitate the attainment of the goal of maximising per capita real income, it must be designed in such a way as to avoid excess burdens on the onehand, and to give maximum incentive to changes in economic behaviour that increase real income on the other. By excess burden is meant reduction in private sector real incomes caused by taxes over and above those required to make resources available for governmental sector production. In the context of optimum taxation for the attainment of optimum taxation for attainment of optimum economic welfare there must be maximum freedom of choice consistent with the welfare of others. To attain maximum social advantage, a neutral tax is desirable.

17.14 SUGGESTED BOOKS

1. B.P Thyagi : Public Finance
2. H.L.Bhatia : Public Finance
3. Hugh Dalton : Principles of Public Finance
4. R.A Musgrave : The Theory of Public Finance

17.15 MODEL QUESTIONS

I Answer the Following Questions

1. What do you mean by tax burden? How can be measured?
2. Explain the components of the burden of tax

3. Critically examine the theory of optimal taxation
4. What are the limitations of distribution of tax burden

II Explain the following concepts:

a. Money burden & Real burden
b. Absolute tax incidence
c. Differential tax incidence
d. Excess burden doctrine
e. Neutral Tax
f. Equity and efficiency of taxes.
g. Least burden of tax.

UNIT –18: THEORIES OF INCIDENCE – SHIFTING INCIDENCE – MUSGRAVE'S CONTRIBUTION TO THE THEORY OF INCIDENCE

Structure

18.0 Objectives

18.1 Introduction

18.2 The impact of tax

18.3 The incidence of tax

18.4 Shifting of tax

- 18.4.1 Forward shifting of tax
- 18.4.2 Backward shifting of tax
- 18.4.3 Tax capitalization

18.5 Theories of incidence of taxation

- 18.5.1 The concentration theory
- 18.5.2 The diffusion theory
- 18.5.3 Demand supply theory

18.6 Demand supply theory of incidence of taxation

18.7 Incidence of some particular taxes

- 18.7.1 A tax on monopoly profits
- 18.7.2 Incidence of income tax
- 18.7.3 Incidence of tax on property

18.8 Double taxation

18.9 Certain concepts of incidence

18.10 Musgrave's contribution to the theory of incidence

18.11 Summary

18.12 Suggested books

18.13 Model examination questions

18.0 OBJECTIVES

The purpose of this unit is to explain different concepts relating to impact, incidence and shifting of taxation and analyse different theories pertaining to the measurement of incidence and also to understand the views of Musgrave on theory of incidence.

After reading the unit, you will be able to

- Identify the concepts of impact, incidence, shifting, tax capitalization and double taxation.
- Explain the theories of incidence of taxation
- Analyse, graphically the demand supply theory
- Discuss the incidence of few particular taxes
- Understand Musgrave's contribution to the theory of incidence

18.1 INTRODUCTION

When the government imposes a tax, it is paid by the person or the economic unit which is bound to do so. Every tax reduces the disposable income of the tax-paying unit. So, if there is any possibility, the tax payer tries to shift the tax burden to others. In practice, every economic unit may be involved in innumerable economic transactions. So, if there is always a tendency for the tax payers not to bear its burden. And also to know the views of Musgrave on incidence. In this context certain terms have been coined so as to understand how the tax paid by the tax paying unit impossible of being shifted. Broadly, there are three such terms – (a) the impact of tax (b) the incidence of tax and (c) the shifting of tax. We may now try to understand these terms.

18.2 THE IMPACT OF TAX

When government imposes a tax, the money burden of it is borne in the first instance by the person who is legally bound to pay the amount of tax to the government. This is called the impact of tax. In other words, the legal responsibility is on that person. This represents only the money burden. For example, the union excise duties in India are paid by the manufacturer of the product on which the government imposes the duty. But obviously it is not the final resting place of the tax. The manufacturer who paid the union excise duty always tries to shift the burden to others. So in the chain of transactions we may notice that the duty is passed on from manufacturer to whole seller and then to retailer but finally to consumer who purchases the product. Therefore, although the manufacturer paid the amount of tax at the first instance as he is legally bounded to do so, he did not ultimately bear the burden of it. Sometimes

it may not be possible for the tax paying unit to pass on the burden to others. Sometimes would it be ossible only to partially shift the burden to others, again it is a questionable point.

18.3 THE INCIDENCE OF TAX

While the impact of tax is on a person who pays it in the first instance, the term "incidence" refers to the ultimate burden of tax. The incidence is on a person or group of persons who bear the ultimate burden of tax. The incidence is on a person or group of persons who bear the ultimate burden of tax. The incidence is on person or group of persons who bear the ultimate burden of a tax.. According to Seligman incidence is defined as " the settlement of the tax burden on the ultimate tax payer". In other words it is the final resting place of the tax. The person who bears the incidence cannot shift the burden any further. In the words of Musgrave " the term incidence as commonly used refers to the location of the ultimate or the direct money burden of the tax as such.. It is said to occur when a particular price of the tax comes to rest with the final payee".

18.4 SHIFTING OF TAX

The process of transferring the money burden of a tax is called 'shifting '. It refers to the various processes by which the direct money burden on account of tax is passed on through price adjournments or cost adjustments from the point of impact to the final resting place. The process of shifting goes on continuing till the incidence of the tax is reached. It may be noted that shifting of the money burden is legal where as tax evasion is illegal. Shifting is normally done by suitable price adjustments. The tax is included in the price of the commodity. It is passed on from the manufacturer to the whole saler and then to retailer and finally to the consumer. Sometimes, it is also possible to shift the burden by making suitable adjustments of the prices paid to the factors of production. Similarly, sometimes if the price of the goods on which tax is imposed remains the same, shifting may still take place in the form of change in the quantity of the good.

18.4.1 FORWARD SHIFTING OF TAX

Price of the commodity normally constituents the vehicle for shifting the direct money burden of tax. Assuming that all other factors in the process of shifting remain unchanged, if a tax is completely shifted, the price of the taxed commodity would be higher by the amount of the tax. If the tax is shifted from manufacturer to whole saler and then to retailer and finally to consumer it is known as 'forward

shifting'. Price of the commodity is increased in the case of forward shifting. Sometimes complete shifting of the tax is possible. Sometimes partial shifting may take place. There may be occasions also when it would not be possible for the tax paying unit to shift the money burden to others. In such a case, there is no shifting. The impact and incidence would be on one and the same tax paying unit.

18.4.2 BACKWARD SHIFTING OF TAX

If the price paid to the factors of production is affected due to shifting of tax, it is known as 'Backward Shifting'. In other words, the price of the commodity would remain the same even after imposition of tax as far as the consumers are concerned. But the remuneration of prices paid to the various factors of production, which have been made use of in the making of the goods, will be less. An example makes this point clear. Let us suppose that the supply of raw materials to an industry is inelastic. It means the suppy cannot be reduced even if the industry reduces the price of the raw material. SO, when a tax is imposed on the industry, it is possible to shift it backwards by reducing the prices of the raw material. So, when a tax is imposed on the industry it is possible to shift it backwards by reducing the prices of the raw material. On the other hand, if the supply of the raw material is elastic, it is not possible for the manufacturer to shift the money burden of tax backwards. Similarly, in a locality let us suppose there is inelastic supply of labour. The manufacturer can shift the tax to the labourers by reducing their wage. We, however assume that other factors like trade union's pressure etc, do not influence the process of shifting of the tax.

18.4.3 TAX CAPITALISATION

One special type of backward shifting of tax is often attributed to what is known as "tax capitalization". When certain permanent assets yielding certain percentage of their value as annual income are sold, the buyers will calculate the future burden of the tax and try to shift the entire or part of the burden backward to the sellers. The person who desires to purchase such durable assets pays a lower price at the time of purchase itself. He will discount the value of property or security by capitalization of tax in order to escape from the payment of tax. An example of tax capitalization is as follows.

Suppose a land is valued at Rs.1,000/- and it yields an annual income of Rs.50/-/ Let us also suppose that there is a specific tax of Rs.10/- on it per annum. The owner of the land would be getting a net income of Rs.40/- per annum. It can be seen that without tax the land yields an income of Rs. 5% return on value of the property, which he proposes to purchase even after payment of tax, he would be

willing to take the land for 800/- only. In other words, a 5 % of its value. If the buyer desires to maintain a 5 % return on Rs.800/- would be Rs. 40/- per annum. Although the asset value is Rs.1000/-, the buyer would be escaping from the future tax payments, if he gets the same at Rs.800/-. In other words, a lumpsum of Rs.200/- is reduced which represents the entire money burden of the tax. It may however, be noted that tax capitalization is possible under certain conditions only. The value of the asset as well as the annual income from it should be stable. The buyer should have alternative avenues of investment. Capitalisation is possible in such of those cases where property has both capital value as well as annual income.

Check your progress : I

1. What is the impact of tax?

2. What is the incidence of tax?

3. What is meant by shifting of tax?

5. What do you mean by tax capitalization?

18.5 THEORIES OF INCIDENCE OF TAXATION

These theories can be classified in to classical theories and modern theories. Concentration theory and diffusion theory are part of classical theory and demand supply theory pertains to modern theory.

18.5.1 THE CONCENTRATION THEORY

According to physiocrats, a school of french thinkers in the 19th century all taxation except on rent was necessarily shifted. They believed that agriculture was the only productive occupation and all other occupations were sterile and unproductive. So, all the non-agricultural occupations do not produce a surplus. They favoured a single tax on land and did not favour any tax on the other on other occupations. They thought that even if some other taxes were imposed on non-agriculturist they would necessarily shift the same ultimately to agriculturist. It is because, no surplus is generated with the non-agriculturists. This view of the phisiocrats cannot be taken as correct. Surpluses could be generated in occupations other than agriculture also. In modern days, as we have already seen in the cannons of taxation, that single tax system is not favoured. But the thinking of physiocrats makes a point clear in that if surplus is not generated, the money burden of the tax cannot be borne and tax paying unit tries to pane ways and means in order to pass on the burden to others. In their view all taxes are shifted and get concentrated on agricultural rent.

According to the classical economists, surplus generated in the economy are of two types namely rent and profit. Land rent arises, according to Ricardian theory due to the operation of law of diminishing returns in agriculture and Malthusian theory of population. Now if a tax is imposed on agriculture produce what will happen. Agricultural prices go up which increases the cost of subsistence of the workers. Consequently, wages would have to increase which means profits would decline. Agricultural rent would not be affected, as the landlords would pay the tax out of higher sale proceeds collected by them through higher agricultural prices. So, the incidence is on profits. But what will happen if a tax is imposed on wages. Even then also the incidence would be on the profits but not on the rents. Additional money wages have to be paid to the workers to maintain a given real subsistence. If tax is imposed on the profits itself, it is not possible to shift the same by lowering wages, which are already at subsistence level. But if a tax is imposed on agricultural rent no possibility of its being shifted to others as rent does not form part of the cost of production. The concentration theory could not provide a satisfactory explanation to the problem of incidence of taxes.

18.5.2 THE DIFFUSION THEORY

According to this theory, the incidence of taxation is diffused in the economic system. As there is interdependence of various economic units, a tax imposed at one place could be shifted many times in such a manner that it becomes very difficult to locate the ultimate resting place of it. SO, the supporters

of the theory like Mansfield and Canard argued that it was not possible to investigate the ultimate incidence of a tax. They believed that energy tax was shifted and reshifted till the burden get eventually distributed over the whole society equitably. This theory has been criticized by many economists. According to Dalton, the diffusion theory simply runs away from the basic problem of ascertaining the incidence and the effects of a tax. Although in respect of some taxes, it is very difficult to estimate both the incidence as well as the effects, it is not correct to view that they are diffused equitably in the whole of the economy. Diffusion theory assumes perfect competition and perfect mobility of the factors of production from one employment to another without cost differences. In practice the situation is, however, different. Markets are seldom adequately competitive. Also, factor mobilities are restricted by more than one reason. Musgrave also did not subscribe to the views of the diffusion theory. The assumption of the diffusion theory that all taxes enter into cost of production and are thus diffused is not correct. These are certain taxes like those imposed on property, interest and wages do not always from part of cost of production. Diffusion theory has, therefore been discarded.

18.5.3 DEMAND SUPPLY THEORY

This theory can be stated to be the modern theory of incidence of taxation. According to this theory incidence of taxation. According to this theory, incidence of tax resembles the determination of value, which is influenced by the demand and supply forces in market. We have already seen that shifting can take place through price transactions. And price transactions are obviously determined by the market forces of demand and supply. In other words, factors, which influence the market situation, also influence the process of tax shifting. Certain factors like the conditions of the market, mobility of factors like the conditions of the market, mobility of factors of production, the elasticity of supply and demand etc. often influences tax shifting.

Check your progress – II

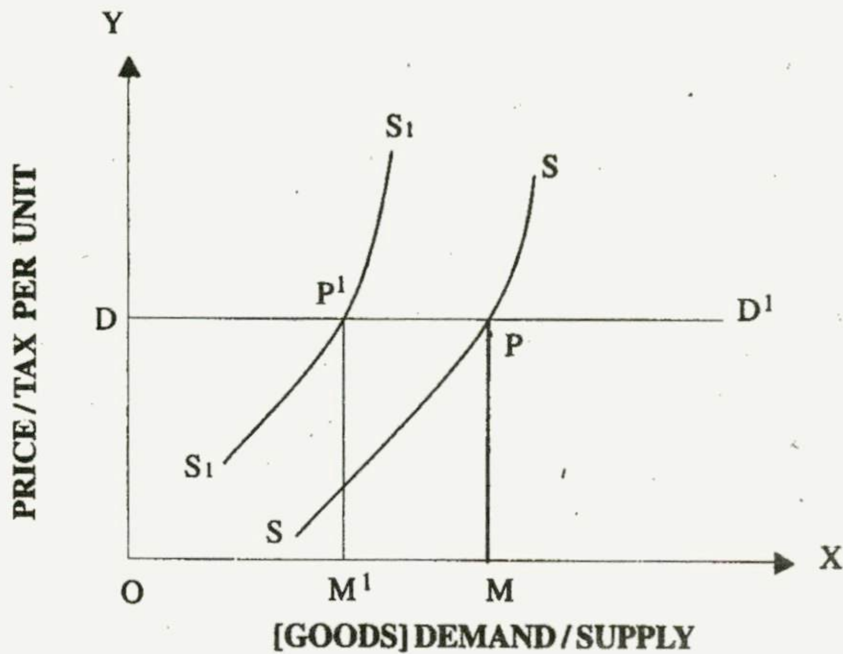
6. What is diffusion theory?

7. What do you learn from demand supply theory of incidence?

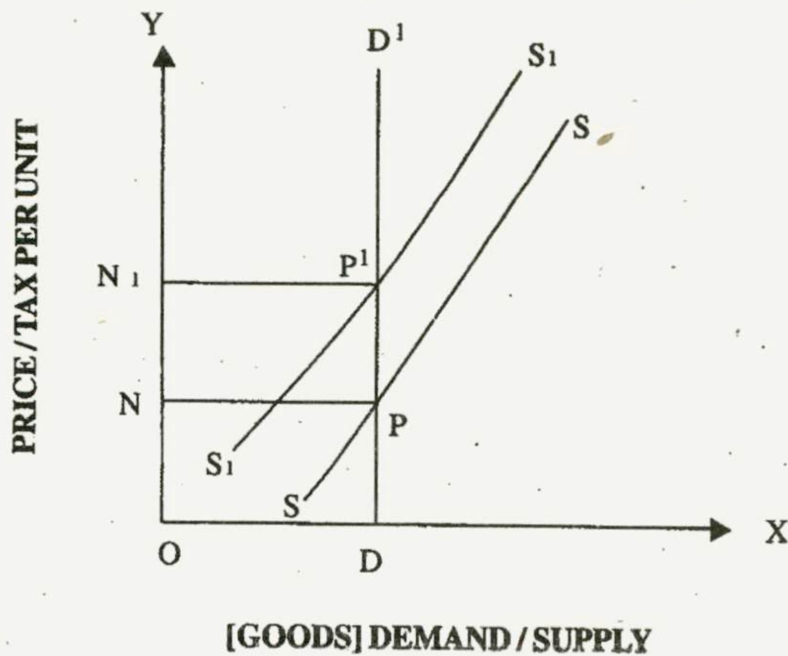
18.6 DEMAND SUPPLY THEORY OF INCIDENCE OF TAXATION

At the outset, it may be stated that when a tax is imposed, the price of the commodity increases. If the price of the commodity increases by the full amount of tax, the incidence is wholly on the consumer.

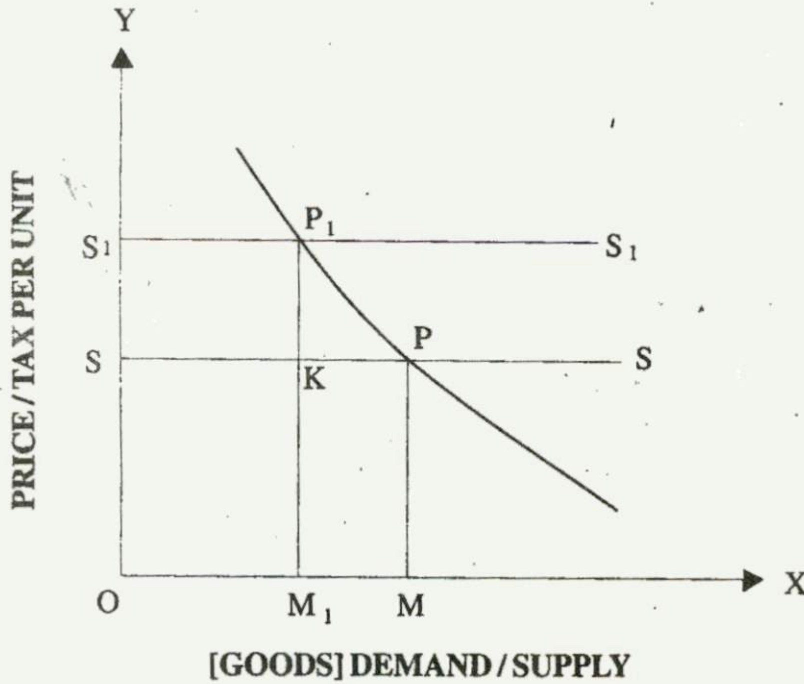
If the price does not rise at all, this incidence is wholly on the consumer. If the price does not rise at all, this incidence is wholly on the producer or seller. If on the other hand, price has increased less than the full amount of tax, the incidence is shared between the sellers and buyers. Elasticity of demand is taken for ' forward shifting' while elasticity of supply is taken for 'backward shifting'. Tax on a commodity having inelastic demand is passed on the consumer. For instance, taxes imposed on necessaries are therefore, the consumers cannot very much reduce their demand. In other words, the sales are not very much declined in the producers or sellers point of view. On the other hand, if taxes are imposed on comforts and luxurious, what will be the position? As these commodities have relatively elastic demand, the incidence of taxation cannot be completely shifted to the consumers. A part of the incidence has to be borne by the sellers. It is because, goods having elastic demand if taxed affect the sales of the producer or (seller). From this, it is clear that tax shifting depends upon the comparative resistance of the buyers as well as the sellers to bear the money burden of tax. The buyers try to avoid the incidence, while the seller tries to shift the incidence to the buyer. The incidence of taxation is therefore, determined on the basis of the relative elasticity of the demand and supply curves. When the demand curve is perfectly elastic, the incidence of tax will be wholly on the seller. Any increase in the price on account of the tax, adversely affects the demand for the commodity. SO shifting to the consumer is not possible. If the demand curve is vertical i.e., perfectly inelastic, the incidence will be completely on the buyers. Although the price of the goods increases on account of the tax, the buyers cannot reduce their demand. It is easy for the seller to shift the tax burden to the buyers. Similarly, if the supply is perfectly elastic, the tax is wholly borne by the buyers. It is perfectly inelastic, the incidence will be wholly on the seller. These situations are shown now diagrammatically.



In the above diagram, DD_1 is the demand curve for the product. The price is PM before imposition of tax. Suppose a tax has been imposed and consequently the supply curve SS has shifted left wards. The new price P_1M_1 is also the same as PM, the before tax price of the goods. The entire incidence of the tax is completely borne by the sellers. The demand curve is perfectly inelastic shown in the diagram.

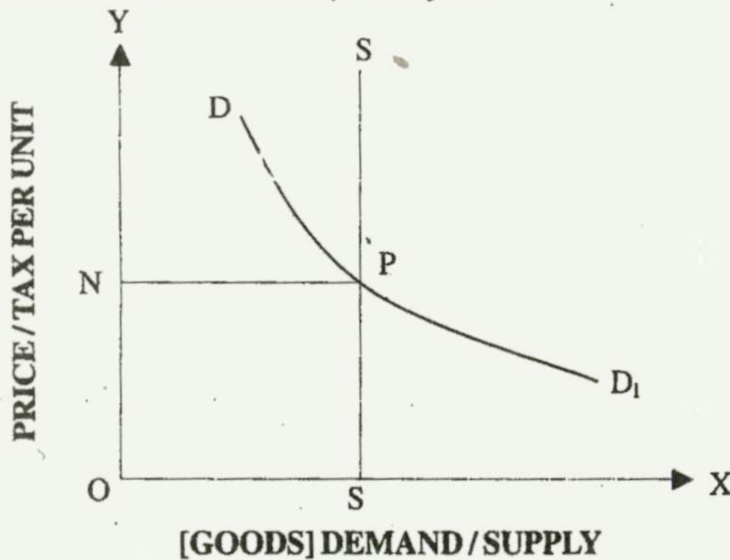


In the above diagram, we have shown that if the demand curve is perfectly elastic, the complete burden is borne by the buyers. D_1D is the vertical demand curve. SS is the supply curve. After imposition of the tax, it moved towards left [S_1S_1]. The price of the goods before the imposition of tax was PD and after the imposition of the tax, it has risen to P_1D. As the demand is perfectly inelastic, it was possible for the buyers to avoid the tax. The sellers in this case can shift the burden to the buyers completely P_1P represents the tax.



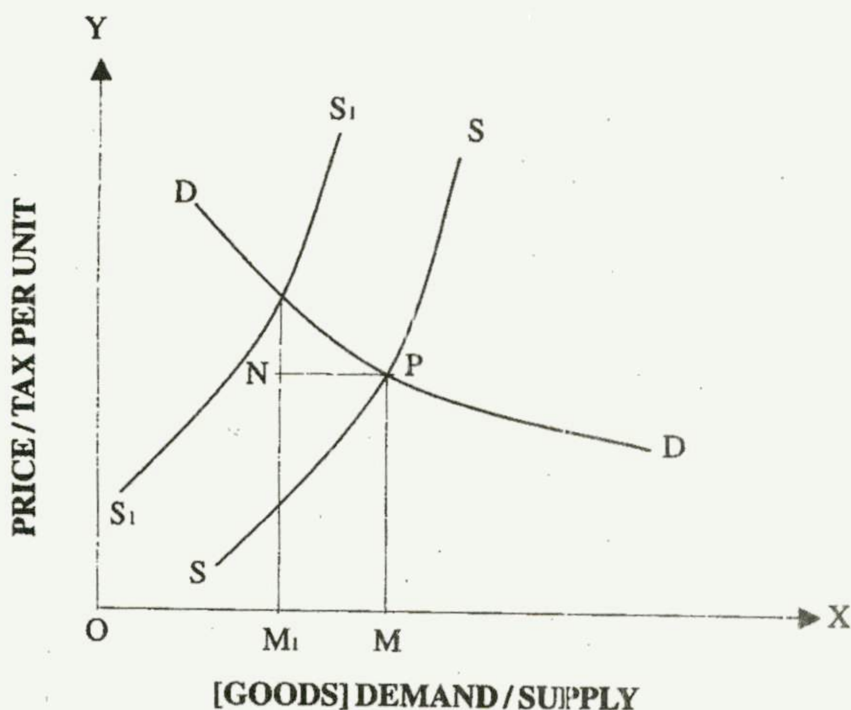
[GOODS] DEMAND / SUPPLY

In the above diagram supply curve is perfectly elastic. If a tax is imposed, it shifts upwards (S_1S_1). The entire tax P_1K is borne by the buyers.



[GOODS] DEMAND / SUPPLY

In the above diagram, we have shown a perfectly inelastic supply. The price before tax is PS. After imposition of tax also, it is not possible for the price to go up. The supply being fixed with the demand DD_1 the same price would prevail even after the tax is levied. So, the entire tax is borne by the sellers. In actual practice, the demand and supply curves would not be either perfectly elastic or perfectly inelastic. So, what would be the position, if we consider a situation with the usual shapes of the demand and supply curves, the demand curve normally slopes downwards from the left to right. Similarly, supply curve normally slopes upward, from left to right. In the below diagram, we have shown the usual demand and supply curves and found out what would happen if a tax is imposed.



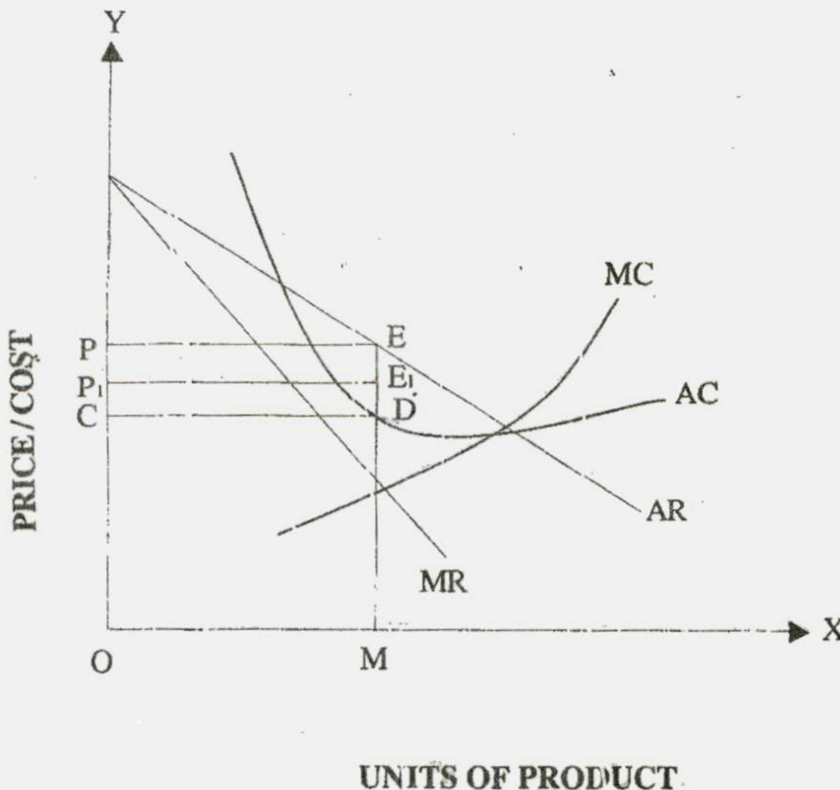
In the above diagram, DD and SS are usual demand and supply curves of a commodity. PM is the equilibrium price. If a tax is imposed, the supply curve shifts upwards towards left (S_1S_1). The new equilibrium price is P_1M_1. Therefore, the price of the goods has increased by P_1N. The tax per unit is represented by the vertical distance between SS and S_1S_1. Therefore the incidence of tax is given by P_1K, which is equal to P_1N on the buyer and NK on the seller. In other words, the tax incidence is shared between the buyer and the seller in proportion to the elasticities of supply and demand.

18.7 INCIDENCE OF SOME PARTICULAR TAXES

18.7.1 A TAX ON MONOPOLY PROFITS

A monopolistic fixes his output and price in such manner that profits are maximized. It is possible when he attains the profits maximizing rule namely marginal cost (MC) must be equal to marginal revenue (MR). Suppose a tax is imposed on the monopolistic profits, who would bear the incidence. Actually he is supposed to have chosen the profit maximizing position even if no tax on his profits is imposed. So it is generally believed that the monopolistic bears the incidence of tax as he cannot shift the burden on to the consumers (i.e. buyers of his goods). It may be noted that a monopolistic bears the incidence of tax as he cannot be shifted to the buyers. As rightly shown by R.A Musgrave and Peggy B Musgrave, the monopolist finds his profits reduced by the tax and cannot pass it on to the consumer via higher prices if he is to remain a profit maximiser.

A monopoly profits would get reduced by the amount of the tax. The situation can be shown in figure also.



UNITS OF PRODUCT

In the above diagram AR and MR are the overage and marginal revenue curves, downward sloping, as is the usual case with a monopoly market. Before tax, OM is the output produced and OP is

the monopoly price. Monopolist gets maximum profits represented by CDEP; when MC=MR. If a tax is imposed, as shown earlier it cannot be shifted. So the total profits CDEP get reduced. After the imposition of tax, still he maximizes his profits with MC=MR. But his profits are reduced to CDE1P1. If however, a tax is imposed ob the states, the supply curve will shift according and as explained earlier, the tax incidence will be shared between the monopolist and the buyers in proportion to the elasticites of demand and supply.

18.7.2 INCIDENCE OF INCOME TAX

A tax imposed on the personal incomes of people are known as 'Income Tax' which is generally not shifted. Income tax is not associated with exchange transactions, which are necessary for shifting the incidence of tax to others. In other words, income tax cannot raise cost or price of any goods. All costs incurred in the generation of income are normally deducted before net income is subjected to taxation. In the case of salaried class, the gross income is taken first and later all permissible deductions are made to arrive at assessed income for tax purpose. Income tax is a direct tax. The tax rates are different for different states of income. In some countries income taxation discrimination between 'earned' and 'unearned' incomes.

18.7.3 INCIDENCE OF TAX ON PROPERTY

Property may be used for either consumption or production. Suppose a tax is imposed on the owner of the property, which is used for consumption. The incidence of the tax cannot be shifted, as there is no price vehicle for forward shifting. For example tax imposed on a house or a residential land cannot be shifted. But sometimes it is noticed that house tax is indirectly shifted by raising the rents from tenants. In the case of the property tax there is possibility of backward shifting which is known as capitalization.

The purchaser of the property discounts its value for future payments of tax.

What will happen to the incidence of tax on property if it is used for production? Suppose a building is used for manufacturing certain products. It is possible to shift the tax incidence on those who will purchase the products. There is therefore forward shifting of tax, which again depends upon the elasticities of demand and supply of the product.

In addition to the main factors that determine tax shifting as the basis of elasticities of demand and supply, there are some more factors, which might influence the incidence of taxation. They are more

related to the usual practice adopted in the market. For instance, consumers may not be aware of the actual price fixed for a product by several producers. An incidental seller may quote a price inclusive of the tax and shift the burden on to the buyer. Sometimes due to market imperfections, it is possible to increase the price more than actual amount of tax. Due to taxation of inputs entering into the making of goods, there may be what is known as 'cascading' effect. The price of the goods increases much more than the amount of tax due to cascading effect also. In some occasions when the tax is very small, the producers or sellers may absorb the tax by themselves without increasing the price of the gods so that they would not loose the goodwill of the buyers. In the case of commodity for which there are a good number of substitutes, tax shifting becomes difficult. The consumer may prefer to shift their demand from the taxed commodity to such of those goods, which are either not taxed or taxed at a lower rate.

18.8 DOUBLE TAXATION

If the same taxable resources are taxed more than once, it is called 'Double Taxation'. The government of a country may tax not only its own subjects securing their incomes from within the national territories but even the foreigners who earn certain incomes from within their taxing country. Different countries adopt different tax taws and thus rise to double taxation.

Suppose 'X' earns income in country A although he belongs to country B. The income of X is taxed not only by the government of country A but also by the government of country B. Sometimes, it has been argued that double taxation may arise not only due to earnings incomes elsewhere but also within the same country. For example, in a partnership firm not only the profits of the company are taxed under the corporation tax but also the dividends of the shareholders are brought under the corporation tax but the dividends of the shareholders are brought under the fold of personal income tax. But ore often double taxation s referred to taxing countries by two or ore governments. Double taxation ay adversely affect the incentives of the people to hard work. In recent times the problems of double taxation have been recognized by the taxing countries. Certain concessions are given to the persons fro payment of income tax in both the countries.

Check your progress - III

8. Can income tax be shifted?

9. What are the determining factors of tax shifting?

10. What is meant by double taxation?

18.9 CERTAIN CONCEPTS OF INCIDENCE

In recent times, economists like Mrs. Ursula Hicks, R.A. Musgrave etc, have interrupted tax incidence in terms of changes in the distribution of income in the economy. According to these writers, there are mainly three important effects on account of changes in the budget policy of a government. a) there would be changes in the resource transfer fro public to the government, b) output effects and c) effects on the income distribution. The term 'incidence' may be taken to mean only the 'money burden'. As far as interpreting tax incidence in terms of distribution changes, we have certain concepts like specific tax incidence; differential tax incidence; the incidence of public expenditure and balanced budget incidence. These concepts have been dealt with elaborately in subsequent lesson 'burden of taxation'.

According to Dalton the incidence of tax can be analysed broadly under two types. First is the direct money burden. Second is the real burden of a tax. When a tax is imposed t is shifted to other depending upon the conditions of the market, nature of the product, elasticities of demand and supply etc. In the words of Dalton "To every shilling of revenue raised, there corresponds a shilling of direct money burden or incidence is to locate the person who ultimately pays the tax. So far as the second version of Dalton is concerned, it may be noted that payment of tax may result in loss of economic welfare strictly speaking this is not a problem of incidence but a problem connected to the real burden of the tax. There may be direct as well as indirect real burden of a tax. Real burdens are measured in the form of changes in consumption, income distribution etc.

Mrs. Hicks also makes a distribution between formal and effective incidence of a tax. Formal incidence according to her is the direct money burden, while effective incidence is in the nature of broad effects of the tax. So, Mrs.Hicks formal incidence more or less resembles the direct burden stated by Dalton. According to to R.A. Musgrave the effects of the imposition of a tax may be on a number of important economic variables. They may be influencing consumption, production, employment and dis-

tribution of wealth and income in a country. In the words of Musgrave " The effects are defined as residual, including both changes in out put and those changes in distribution which are not considered a part of the direct money burden".

18.10 MUSGRAVE'S CONTRIBUTION TO THE THEORY OF INCIDENCE

Modern interpretation is being given to the concept of incidence by Ursula Hicks, Musgrave and Swedish economist Knutwicksell. To those writers 'incidence' refers to changes in the distribution of income, which arise as a result of changes in taxation and public expenditure. It is said that whenever budget policy is changed, there are three important effects viz, (a) resource transfers from public to the government, (b) output effects and (c) effects on the distribution of income as between different sections of the people. According to Musgrave, the term incidence is used to designate the third type of effect. More specifically resource transfer may occur without taxes, and taxes may be imposed without resource transfer, the resulting change in the distribution of incomes has been referred as incidence by Musgrave.

It is clearly seem that this concept of incidence is entirely different from the traditional concept. Musgrave stressed the importance of public revenue and expenditure, while the role of public expenditure has been completely neglected by the traditional theory of incidence.

So, Musgrave opines that " a change in the distribution of income available for private use which arises as a result of changes in budget policy is called as incidence". Moreover Prof. Musgrave pointed out that such a distributional change may be brought about through the following different polices.

TAX INCIDENCE:

If changes in tax are only considered public expenditure remaining constant. Changes or modifications in tax policy may be due to a change in distribution is called specific tax incidence. For e.g., in the situation of full employment, a decrease in income tax rates, will allow large income with the public who may be expected to increase their demand for goods and services. An increase in price and costs may be anticipated which in turn, will lead to increased public expenditure in money to maintain the same level of real purchases, inflation takes its course. In contrast to this, an increase in income tax rates will give room for the decrease in private expenditure and leads to inflation. It is clear that both inflation and

deflation will have their impact on distribution of income. Inflation will cause to transfer of wealth and income from poor to the rich.

DIFFERENTIAL TAX INCIDENCE

This refers to the distributional effect that result when one tax is substituted for another thinking that the money yield of the two taxes is the same when one tax is substituted for another, and money income to the government does not change, it will imply that the amount of public expenditure will remain the same various kinds of tax will affect private demand price level. Public expenditure in money terms will have to change if real expenditure has to be maintained. Musgrave pointed out that it would be well to define differential incidence as the difference in the distribution that results as a result of two tax polices that provide for equal yield. This implies that money yields are sufficient to finance a given level of real expenditure of the government under different prices called by the substitution of one tax by another. The concept of differential tax incidence is of utmost important for framing an alternative tax policy to finance government expenditure and to maintain economic stability.

EXPENDITURE INCIDENCE:

Suppose taxes are held constant and consider the changes in expenditure on different items under a balanced budget to avoid the incidence of inflation and deflation, the changes in the distribution of income disposable for private use under such a policy may be referred to as differential expenditure incidence. Musgrave was of the opinion that the concept of differential tax incidence to analyse the problems of taxation and transfer of resources. As stated by Musgrave " the problem of incidence by its very nature is of great interest in changes in tax or transfer policty than the benefits derived from public services, may have distributional significance, especially in case of merit wants, these benefits are not part of incidence. The term we use it is limited to changes in the distribution of income disposal for private use"

BALANCED BUDGET INCIDENCE

At least we can think of distributional changes that involve adjustments in both tax and expenditure policy. Foe eg. There can be a change in public expenditure consisting a change in the level of resource transfer and this may accompanied by such changes in tax functions so as to in the necessary finances. These changes in distribution may be regarded as " balanced budget incidence" this concept of incidence may be considered as the best since it comes closet to the common sense meaning of incidence as allocating the cost of public services among the members the groups that benefit direcdtly or

indirectly from public expenditure.

A comparison between modern concepts and traditional theory of incidence.

Prof. Musgrave has pointed out the following comparison between these two approaches.

(1) The traditional distinction between direct effects and indirect effects involve an arbitrary separation between various elements of the total change that are neither separately identifiable nor separate significance as matters of policy. Musgrave said that the distinction resource transfer distributional change and out put effects are not open to this objection. The three aspects are definitely measurable and significant components of the overall change.

(2) In determining the distributional changes that result from an adjustment in budget policy, Musgrave believed in tracing both losses and gains that may occur to a particular individual. Here he pointed out that this runs counter to the notion that imposition of tax imposes a loss and that is the problem of incidence to locate this loss. But according to Musgrave, the latter is clearly not the problem, if we measure the results of atx, tax incidence while holding constant resource transfer of public use. Here no reduction in resource available for private use occurs and the losses to some will be accompanied by gains to others.

(3) In any case, we can never point to particular items of loss and identify these with the burden of the new tax or the cost of new resource transfer, while reducing other gains or losses to the status of indirect effects. Rather, we must consider the entire change in distribution including all individual gains as well as losses.

With reference to the above discussion, it is clearly seen that the analysis of Prof.Musgrave on incidence is of more practical utility than traditional approach.

18.11 SUMMARY

It may be noted from the foregoing discussions that in taxation as far as incidence is concerned it is necessary to keep in mind two fundamental aspects. Firstly, all taxes are paid from the income stream of the individuals. So it involves a transfer of purchasing power from the individuals or tax paying units to the public authority. Secondly, the person on whom the tax is imposed need not necessarily bear its incidence. He may pay the tax to the public authority at the first instance but later tries to shift the money burden of it either forward or backward, which again depends upon many factors. The effects of tax are related to the real burden while incidence is to the direct money burden of tax.

18.12 SUGGESTED BOOKS

1. Bhatia H.L : Public Finance
2. Thagi B.P : Public Finance
3. Musgrave R.A. : Theory of Public Finance

18.13 MODEL QUESTIONS

Answer the following questions

1. Explain the incidence of taxation
2. Briefly discuss the theories of incidence of taxation.
3. Examine the demand supply theory of incidence of taxation.
4. Distinguish between impact and incidence of a tax.
5. Describe the shifting methods of a tax.
6. Explain the concentration theory and the diffusion theory.
7. Explain the following concepts.
    a. Tax capitalization
    b. Double taxation

NOTES

UNIT 19 PUBLIC DEBT

19.0 Objectives

19.1 Introduction

19.2 Classical Theory of Public Debt

19.3 Internal Debt in the Classical System.

19.4 Ricardian Equivalence or Debt Neutrality

19.5 Pay-As-You-Use Finance

19.6 Pay-As-You-Go Finance

19.7 Intergeneration Equity

19.8 Loan Finance to Adjust-Distribution

19.9 Loan Finance to Reduce Tax Friction

19.10 Loan Finance of Self-liquidating projects

19.11 The Capital Formation Approach

19.12 Internal Debt in the Compensatory System

19.12.1 Fixed Investment Model

19.12.2 Pay-as-you-use finance

19.12.3 Intergeneration Equity

19.12.4 Old-age Insurance

19.13 Mixed System

19.14 Let Us Sum Up

19.15 Key concepts

19.16 Self-assessment questions

19.17 Further Readings

19.0 Objectives

After studying this unit you will be able to understand

- the role of loan finance in the classical system
- the choice between loan finance and tax finance with reference to their impact on aggregate demand
- the choice between loan finance and tax finance in terms of resource withdrawal from private consumption and private capital formation.
- the role of loan finance in the classical system in financing social works, private benefits and its impact on intergeneration equity, distributive justice, tax friction etc.,
- the role of loan finance in the compensatory system where the level of investment is fixed.

19.1 Introduction

Public borrowing or public debt as an instrument of fiscal policy is of recent origin. When a government raises loans internally or externally from banks, individuals and financial firms or world's monetary institutions or from foreign governments, it incurs a debt i.e. liability known as public debt. Public debt or borrowing is an important source of revenue to a modern government. Government needs to borrow when current revenue falls short of public expenditures. In recent years the growth of public debt has been a hot issue in the debate over responsible fiscal policy.

19.2 Classical Theory of Public Debt

Public debt was not heard of prior to the 18th century. The classical economists assumed that individual consumer and business firms make use of the resources more efficiently. Under conditions of full employment, the state can acquire resources through borrowing only at the cost of private sector where they are efficiently used. Accordingly, they were generally against the public debt.

19.3 Internal Debt in the Classical System

In the classical system all private income is spent on either consumption or investment. Full employment is secured automatically. Price stability is maintained if the money supply is held stable or increased at the same rate at which real income grows. In this setting there is no need for compensatory finance. Further they presumed that loan finance and tax finance produce identical effects on aggregate demand. However, the choice between tax and loan finance assumed importance because it determined the way in which the resource withdrawal from the private sector will be divided between consumption and capital formation.

Let us assume the classical system. If the savings schedule is wholly interest inelastic and investment schedule is elastic, the entire resource withdrawal under loan finance will be from private capital formation. Private investment will fall and the interest rate will rise, but saving and hence consumption will remain unchanged. But in the case of tax finance, resources will be withdrawal from both private capital formation and consumption, depending on the taxpayers marginal prosperity to consume.

On the other hand, if the savings schedule is interest elastic, while the investment schedule is interest inelastic, the entire resource withdrawal for loan finance will be from private consumption. The rate of interest will rise until saving increases by the amount of public borrowing. If both the saving and

investment schedules are interest elastic, the resource the withdrawal will be spread between consumption and capital formation for both types of finance. More over the result depends on the type of expenditure the Governmnets makes. If the Governmnet spends for investment resource withdrawal will be from private capital formation, provided that government investment enters into the same total investment schedule as does private investment. Government investment will reduce the rate of interest and therefore saving.

Therefore, the choice between loan finance and tax finance thus involves a choice between a resource withdrawal largely from private capital formation and largely from private consumption. A fiscal policy designed to encourage growth relies on tax finance, while a policy designed to encourage growth relies on tax finance, while a policy designed to support present consumption relies on loan finance. In the classical system the rate of growth may be determined by consumer preference between present and future consumption, and by the return on capital that is obtained in the market. The government's choice between loan and tax finance is to be made as a part of this process, the purpose is not to interfere with the market determined rate of growth, but to align the choice between present and future satisfaction of social and private wants.

19.4 Ricardian Equivalence or Debt Neutrality

David Ricardo observed that raising finance by borrowing is equivalent to raising revenue by taxation. This is so because, just as taxation reduces tax payer's future net worth, in the same way. Public debt also reduces tax payer's future net worth when it is to be serviced and redeemed in future. Thus, both the forms of finance are in a sense, equivalent. This is often referred to as "Ricardian Equivalence". However, the validity of Ricardian equivalence is conditioned by many restrictions. Thus many would opine that it is not a practically valid concept. But against this, J.J. Seater's study on the subject concludes that Ricardian equivalence is strongly supported by data.

19.5 Pay-As-You-Use Finance

Here, we will consider the problem of debt policy in the classical system where full employment is given. Thus, a choice between tax and loan to finance government investment will affect allocation and distribution of resources. When the society decides to provide for satisfaction of certain social wants like play grounds or high ways or public parks etc. a considerable amount of public expenditure will be necessary. Such initial expenditure will provide for future benefits. In such cases, tax payers may not like to pay the entire cost at once and may like to pay over the years as the benefits of the project are enjoyed. This is what is refereed to pay-as-you-use finance. Since the project will continue to give benefit to the society for a number of years, the cost payment by taxpayers could be spread over those years as the benefits are enjoyed by them. This is what is precisely done in the case of satisfaction of private wants and is in conformity with the benefit principle of taxation.

The application of the principle of pay-as-you-use finance is simple in case of a continuous stream of capital outlays as in case of minor irrigation projects like installation of tube wells. In such cases, tax finance of new projects becomes equivalent to pay-as-you-use finance of old projects. How ever, the problem crops up when we consider the capital outlays for a single and discontinuous project, say construction of a hospital complex to provide medical facilities which will require full resource input in the initial period. Resources must be withdrawn from private sector at a time, and there will be reduction in productivity of private economy to that extent.

However, such release of resources may be either from present consumption or from capital formation i.e. future consumption. The adverse effect of immediate huge capital outlay on current consumption can be avoided if the resources are withdrawn from private capital formation. This is done by loan finance. Interest payment and repayment of this public debt will be the actual cost of the project. The cost will be ultimately borne by the taxpayers. The advantage of loan finance is that the burden of taxpayers may be spread over a number of years as the benefits continue to be received by them. Thus, the people will be able to pay as they use the benefit of the project.

In the opinion of Musgrave, "by placing payment on pay-as-you-use basis, loan finance remains a significant instrument of policy, even though of does not increase the total availability of resources. By the nature of the pay-as-you-use principle, public'debt issued for such purposes should be repaid as the benefits from the initial expenditure are being exhausted. The principle is the same as for consumer credit on the private level".

On the basis of pay-as-you-use finance, the budget statement of government is divided between current budget and capital budget accounts. The current budget should be tax-financed while the capital budget is to be loan financed. On the expenditure side of the current budget, the provisions for goods and services that will bring benefits currently to the society are included. Since assets acquired with funds borrowed in the past have started giving benefits which are enjoyed currently, the interest amount is included as an item of expenditure in the current budget. This is because interest is a part of the cost of benefits of the project. In the capital side of the budget, the expenditure includes cost of providing for those goods and services, which will give benefit to society in future. These expenditures will result in acquisition of public assets like highways, buildings etc. Since these benefits will come in future, their capital costs are mobilized through public debt which is included in the receipts side of the capital budget.

Table Budget for pay-as-you-use Finance

Current Budget		Capital Budget	
Receipts	**Expenditures**	**Receipts**	**Expenditures**
(a) Taxes	(a) Expenditures for current benefits	(a) Sale of assets	(a) Expenditures future benefits
(b) Others	(b) Interest amount	(b) not borrowings	(b) Net increase in provision for future benefits.
	(c) Other current expenditures	(c) Net increase in provisions for future benefits	

19.6 Pay-As-You-Go Finance

Pay-As-You-Go Finance refers to a system of benefits payments strictly on contributory and quid-pro-quo basis. In such a case benefit comes to the people out of their past contributions. The payment of old-age pension is an example of Pay-As-You-Go Finance. In the system of financing old-age insurance, all old people do not get benefit. Those who are already aged when the system is introduced cannot receive any benefit since they did not contribute to the scheme in the past. And those who are middle-aged at the time of introduction of the scheme will be able to contribute only for the remaining

period of their working life and hence, will receive benefit only partly after retirement. If the scheme is introduced at the beginning of a persons' working life, he will able to contribute throughout his service period and will get full benefits after retirement. Throughout, the principle of intergeneration equity is compiled with.

The cumulative additions to the contribution of workers will be invested in the capital market. Thus, resources will be transferred from consumption to capital formation. Earnings from such investment will be credited to a reserve fund and the aggregate earnings of the reserve fund will be added to the current contributions of workers. As the system matures, the contributions of those of working age, together with the capital income will play the benefits of the aged. At this point "Pay-As-You-Go basis is achieved".

The system of Pay-As-You-Go Finance prohibits borrowing. As Taylor says, this policy forces upon the fiscal authority the requirement of limiting current expenditures to current receipts. Even though as a long-run policy, particularly for local goverhments, Pay-As-You-Go may be wise, it is not wise to impose the policy by general legislation. If Pay-As-You-Go policy is wise in a given period, that policy should be determined upon by fiscal authorities and reflected in the budget. To impose such a policy by legislation is to abandon good budgetary practice in emergencies. The so-called sound financing method of Pay-As-You-Go is generally observed as an ideal fiscal policy by local governments. In the USA, there are constitutional restrictions on the state and the local governments from increasing their debts in any one year by an amount greater than two-third of the amount by which the debt was reduced during the previous year. There are also same states which impose Pay-As-You-Go by prohibiting debts for ordinary purposes.

19.7 Intergeneration Equity

The general principle of Pay-As-You-Use finance gains in importance if we allow for the fact that facilities provided by government will be used frequently by several generations of taxpayers. This is particularly true in municipal finance, where the composition of the resident group is subject to more or less frequent change. Here the principle of Pay-As-You-Use finance follows directly from that of benefit taxation, and loan finance is required to distribute costs among the various generations in accordance with benefits received loan finance in this case not only provides credit to taxpayers, but also results in a bonafide division of the cost between generations – a result impossible to secure through tax finance.

Here we are dealing with a system in which planned saving is matched by investment, the investment reflects reduced capital formation in the private sector. Moreover we have assumed that saving is inelastic to interest, so that the full amount of government borrowing is withdrawn from private capital formation. Thus the total cost is divided between consumption and capital formation in accordance with the marginal propensity to consume. If saving is interest elastic, the government demand for funds in loan market, will cause an increase in the rate of interest resulting in an increase in the volume of saving and consequential reduction in private consumption.

19.8 Loan Finance to Adjust Distribution

So far we have been concerned with the use of loan finance in the budget of the Allocation Branch. We shall now turn to an application in the context of the Distribution Branch. Under conditions of war economy, it may be necessary for reasons of economic policy to secure a sharp reduction in

consumption. It may be necessary to obtain a larger share of total proceeds from the lower-income groups than seems desirable on grounds of distributional considerations. To compensate this, subsequent adjustment after the war needs to be arranged wartime withdrawals from the lower-income groups may take the form if refundable taxes or forced loans to be repaid subsequently by transfers from the upper-income groups. Thus loan finance may serve as a means of inter temporal redistribution between income brackets, as well as a means of inter temporal shifts between generations.

19.9 Loan finance to Reduce Tax Friction

Let us now turn to shift another function of loan finance i.e. minimizing fluctuations in the level of tax rates due to fluctuations in the level of public expenditures. The avoidance of fluctuations in tax rates may be desirable because changes in rates introduce an element of uncertainty that is disruptive. If we assume that frictional effects of taxation rise at an increasing rate with the level of taxation, friction may be reduced over the years if a fairly stable rate of taxation can be maintained. This requires the use of loan finance. The objective of using loan finance so as to reduce tax friction thus supplements the objective of achieving intergeneration equity.

19.10 Loan Finance of Self-liquidating Projects

Let us now consider the use of loan finance for self-liquidating projects. Self-liquidating projects may be defined narrowly as investments in public enterprises that provide a fee or sales income sufficient to service the debt incurred in their financing or they may be defined broadly as expenditure projects that increase future income and the tax base. Such projects permit servicing of the debt incurred in their financing without requiring an increase in the future level of tax rates. As in private investment, the required capital is obtained properly on a loan basis and must be amortized out of subsequent sales proceeds. This procedure is in compliance with pay-as-you-use finance as well as intergeneration equity.

Self-liquidating investments of the broader type i.e. expenditure provide for future benefits, therefore the arguments for pay-as-you-use finance and intergeneration equity apply. Moreover, taxable income is increased in the future so that the debt may be retired without an increase in tax rates, or with a lesser increase than would be needed for immediate tax finance. Thus, loan finance of outlays that raise the future level of taxable income is sustained on grounds of tax friction as well as considerations of intergeneration equity.

19.11 The Capital Formation Approach

A final view of the capital budget is focused on the contribution of budget policy to total capital formation, public or private in the economy. For this purpose, the balance of the current budget must be defined to show the net addition i.e. surplus or reduction i.e. deficit in capital formation that results. The existence of a deficit or surplus under the capital formation approach is of great importance to the fiscal planning of underdeveloped countries, where the contribution to economic growth may be the very focus of budget policy. If it can be assumed that tax finance comes largely from consumption, whereas loan finance comes largely from private capital formation, the requirement of tax finance for current expenditures implies that budget policy should not retard total capital formation.

19.12 Internal Debt in the Compensatory System

Hitherto we examined the arguments for loan finance in a system where liquidity preference exists and where there is no necessary equity between saving and investment at a full employment income. Therefore, the choice between tax and loan finance did not affect the level of aggregate demand. Now let us relax this assumption and pressure that substitution of tax for loan finance reduces the level of aggregate demand. This particular situation can be examined now.

19.12.1Fixed-Investment Model

Let us begin with the case of an economy where saving interest inelastic and the level of private investment is fixed. In such a system the proper level of aggregate expenditure must be maintained by stabilization policy.

Since private investment is fixed, any increase in public expenditures must be offset by a corresponding decrease in private consumption expenditure. If we assume that public borrowing does not change private consumption it means that loan finance raises aggregate demand by the same amount as does finance out of new money. That is, if the budget is adjusted to provide for the proper level of private demand, any increase in public expenditure must be accompanied by increased taxation. This rule applies whether such expenditures are for current services or for capital outlays.

19.12.2 Pay-as-you-use Finance

It follows that borrowing cannot be used as a means of Pay-as-you-use finance. Any increase in public goods and services expenditures, whether for current services or durable goods requires that there be a corresponding adjustment in taxation. If loan finance is used in the first period, prices will rise and the entire burden falls on 1st, 2nd, 3rd generations. If tax proceeds are used in the second period to retire debt, this transaction will cause a reduction in employment and real income rather than secure a transfer out of full-employment income.

In this model, current expenditures of government should be met through reduction of current consumption in the private sector. Therefore Pay-as-you-use finance for the group as a whole is impossible. In this case there is no logical link between the appropriates of tax or loan finance and the distinction between public expenditures for current benefits and future benefits. There will be justification for loan finance of public expenditure that raise future taxable income.

19.12.3 Intergeneration Equity

While Pay-as-you-use finance is impossible, intergeneration equity may still be applied. Strictly speaking it cannot be achieved in this model through loan finance, but it may be accomplished through a tax-transfer scheme. Assuming that the marginal propensity to consume is 0.75, to reduce consumption by Rs 100 in the first period, Rs. 133.3 must be paid in taxes. In the next periods, to maintain consumption at the same level, tax payments and transfers should be exactly equal to each other. In order to ensure intergeneration equity in this aspect, the reduction in consumption of Rs. 100 should be equally divided between the given number of generations. Therefore, intergeneration equity cannot be secured through loan finance. However, it can be secured through a tax and transfer scheme subject to the condition that consumers respond to refundable taxes and to the refund as an addition to income.

19.12.4 Old-age Insurance

Similar difficulties arise in the financing of old-age security. Lending out the surplus or retirement public debt in the initial period will not raise the level of private investment. Because an excess of receipts over payments reduces aggregate demand and necessities expansionary fiscal measures. Such measures may take the form of reduced taxation or increased expenditures. In both cases the decrease in public debt owing to reserve finance must be offset fully or nearly so by new borrowings to finance an additional deficit in the general budget.

19.13 Mixed System

It is a known fact that changes in the supply of funds have some hearing on the level of investment, with varying degrees of effectiveness, depending on economic conditions at any particular time. In such a setting, the classical principles of loan finance may be applied. Loan finance of additional public expenditures must be supplemented by restrictive liquidity measures in order to obtain the people release of reasons from private capital formation.

Further in the case of social security finance, the net effect of repayment of public debt out of tax surplus in the initial period will not be so deflationary as in the fixed-investment model. Some of the funds paid out in redemption of public debt will be channeled into private investment. However, the net effect is likely to remain deflationary. Same adjustments must be made to offset this. Policy moves favouring reduction in taxes and increase in private consumption are needed.

Thus it can be said that the principles of intergeneration equity and reserve finance are more or less imperative in the fixed-investment model, but in the mixed system they are operative, but with qualifications. However, the case is not so clear-cut as in the classical system. In the case of central finance (with the responsibility of stabilization policy) it is better that there should be no association between types of expenditure and the choice between internal loan or tax finance. But in the case of local finance, the capital budget approach is more generally applicable, because there is no immediate concern with stabilization policy.

19.14 Let Us Sum Up

- Public debt is an instrument of fiscal policy.
- Public borrowing is an important source of revenue to a modern government.
- The classical theory explains that under conditions of full employment, the state can acquire resources through public borrowings only at the cost of private sector where they are efficiently used.
- Classicists presumed that loan finance and tax finance produce identical effects on aggregate demand. However, the choice between them is important from the point of view of resource withdrawals impact on private consumption and private capital formation.
- The role of debt policy and its impact on allocation, distribution and stabilization are of crucial importance in making a choice between tax finance or loan finance.
- If we examine the case for loan finance in a system where substitution of tax finance to loan

finance reduces the level of aggregate demand we can notice that it is not possible to achieve pay-as-you-use, intergeneration equity and pay-as-you-go principles.

- In such a setting loan finance of additional public expenditure must be supplemented by restrictive liquidity measures in order to obtain the proper release of resources from the private sector.
- If the net effect of redemption of public debt is deflationary, same adjustments in tax rates are necessary to offset the tendency.

19.15 Key Concepts: -

1. Classical System or Model

A model of the economy in which it is assumed that prices, wages and interest rates are flexible, so that markets are continuously cleared. Classicists did not like state intervention in economic matters and believed that economy has sufficient self-adjusting capacity.

2. Local Governments

The unit of government which does not claim sovereign powers. Their finances are provided by the central and concerned state governments. They may have discretion over some policies, or be required to administer policies laid down by upper layers of government.

3. Inter temporal Redistribution

The extent to which disparities in the distribution of income and wealth are present at different time periods. There could be changes in the pattern of income distribution from one time period to another due to various factors.

4. Amortization

The building up over a period of a fund to replace a productive asset at the end of its useful life, or to repay a loan. In the case of a loan, the amount required for amortization depends on the interest rate which can be earned on the accumulated fund.

5. Compensatory System

It is a system wherein a differential in consumption or investment is needed to maintain the original equilibrium position. There will be no equality between saving and investment and therefore taxation and borrowings affect the economy differently.

19.16 Self-assessment questions

1) Examine the role of loan finance in the classical system with reference to allocation branch.
2) Discus the question of choice between loan finance and tax finance to achieve the principles pay-as-you-use and pay-as-you-go in the classical system.
3) Trace the impact of loan finance on intergeneration equity when investment is variable in the classical setting.

4) In fixed investment model show how it is not possible to achieve pay-as-you-use, pay-as-you-go and intergeneration equity principle.

5) Examine the role of debt policy in the classical full employment equilibrium model.

6) Define the following concepts:

   (a) Loan finance and tax friction

   (b) Loan finance and self liquidating projects

   (c) Loan finance and capital formation.

   (d) Ricardian Equivalence.

19.17 Further readings

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UNIT 20: SOURCES OF PUBLIC DEBT

20.0 Objectives

20.1 Introduction

20.2 Meaning of Public Debt

20.3 Public Debt and Private Debt

20.4 Classification of Public Debt

20.5 Objectives and Importance of Public Debt

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- 20.6.1 Borrowing from individuals
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20.7 Public Debt: Money creation versus Borrowing from the Public

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- 20.8.1 Effects of Public Borrowing
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20. 9 Let Us Sum Up

20.10 Key concepts

20.11 Self-assessment questions

20.12 Further Readings

20.0 Objectives

This unit will enable you to understand

- the meaning and definitions of public debt,
- the difference between public and private debt,
- the classification of debt into various types depending upon the source, nature, composition and magnitude of debt,
- objectives and importance of public debt,
- the debate on money creation versus borrowings from the public and their implications for economic stabilization and
- the economic effects of public borrowing and public debt.

20.1 Introduction

Public debt is the amount of money that a government borrows to finance its fiscal deficit, or to meet emergency expenditure or to carry on development projects. In recent years public borrowing or public debt has become an important instrument of economic stabilization. Public debt is interested with the basic governmental flows of taxation and expenditure. If the volume of governmental expenditure exceeds the volume of tax and other non tax revenues, a deficit budget exists. Such a deficit budget provides the fundamental precondition for debt creation. This debt could be of various types and it can be secured from different sources. As an instrument of fiscal policy it produces a wide range of effects on the economy. Now let us try to understand these aspects of public debt.

20.2 Meaning of Public Debt

Generally, public debt refers to loan raised by a government within the country or outside the country. every government like individuals has to borrow when its expenditure exceeds its revenue. The amount borrowed by the government during any given year constitutes the income of that year. Therefore it may be considered as revenue of the government. But the basic difference between the public debt and other sources of revenue is that public debt has to be paid back by the government and other types of income are not to be paid back. The government collects taxes from the public without any commitment or promise. But public debts are collected by the treasury or government from banks, institutions and individuals on the condition that it will be repaid along with stipulated interest.

Various economists have defined public debt in different ways.

According to find by Shirras "natural debt is a debt which a state owes to its subjects or to the nationals of other countries".

According to Prof. P.E. Taylor, "the debt is the form of promises by the treasury to pay to the holders of these promises a principal sum and in most instances interest on that principal. Borrowings is restored to in order to provide funds for financing a current deficits".

Prof. Carl S. Shoup defines public debt or government borrowing as "the receipt from the sale of financial instrument by the government to individual or firms in the private sector to induce the private sector to release manpower and real sources and top finance the purchase of those resources or to make welfare payments or subsidies".

According to Prof. J.K. Mehta, "Public revenue, therefore, consists of the money that the government is not obliged to return to the very individual from whom it is obtained. Public debt on the other hand, carriers with it the obligation on the part of the government to pay money back to the individuals from whom it has been obtained".

20.3 Private Debt and Public Debt

There are obvious similarities and dissimilarities between private and public borrowing. The government is almost in the same position as is a private borrower in case of acquiring public borrowing. Public authorities borrow funds to acquire certain resources. Similarly, private individuals make use of the borrowed funds to acquire certain resources. Both public and private borrowing involves diversion of funds from one type of use to another. The government may borrow either for consumption or for investment purposes. Let us try to identify the main differences between these two kinds of debt.

(i) The government is sovereign and it has the power of compulsion to raise a loan and determining its repayment. But in the case of private debt, there is no such power of compulsion.

(ii) The government prevails for a longer time and it is possible to take loans for larger periods.

(iii) The loan taken by the government is generally spent on productive purposes, but a private loan can be used both for productive and non-productive purposes.

(iv) Government may borrow from internal as well as external sources like foreign countries. But it is very difficult to borrow from the foreign countries for an individual.

(v) Public borrowings are generally welfare oriented, but private debt is mainly used for profit making activities.

(vi) Government repays its loans through additional taxation. In other words, the burden of public debt is shared by the public collectively. But a private borrower has to repay his debt either out of his personal earnings, or his savings or by borrowing from other sources.

(vii) Rate of interest paid by the government is very low as compared to rate of interest paid by a private borrower.

(viii) The public debt makes its effects on production, distribution, allocation, stabilization, whereas a private debt cannot produce such effects.

(ix) The credit worthiness of a government is very high and therefore it can barrow lent from many sources even at a nominal rate of interest.

(x) Under extraordinary circumstances, the government can repudiate the payment of loans but for a private individual it is very difficult to refuse payment of loans under any circumstances.'

In this way we can identify a number of differences between public and private debt.

20.4 Classification of Public Debt

Public debt has been classified in many ways. Some of them are as follows:

- *Internal and External debt*: - internal debt refers to public loans floated within the country, while external debt refers to borrowings from foreign sources.
- *Redeemable and irredeemable debt*: - The debts which the government promises to pay in future within a specified period is called redeemable loan. Irredeemable debt refers to a loan

which may not be redeemed at all but on which the government promises to pay the interest regularly.

- *Funded and unfounded debt:* - founded debt is a long term debt, undertaken for creating a permanent asset. Unfounded or floating debt is a relatively short period debt meant to meet current need.

- *Compulsory and voluntary debt:* - generally, government debt is of a voluntary type i.e. individuals and institutions are invited to take up government bonds. Sometimes pressure may be applied by the government in selling bonds and loans such raised are known compulsory borrowings.

- *Marketable and non-marketable Debt:* - The distinction depends on the negotiability of government loans between interest bearing and non-interest bearing loan. Marketable debt is one in which the securities are negotiable in the open market. Non-marketable debt is that where securities cannot be sold in the stock exchange markets. Its main objective is to prevent fluctuations in their prices.

- *Gross and net debt:-* Gross debt consists of the total amount of debt outstanding at any time whereas net debt is the balance amount of gross debt minus sinking funds or other assets ear marked for repayment of debt.

20.5 Objectives and Importance of Public Debt

In recent years public debt has became very common. Every government resorts to public borrowing with a set of objectives. The objectives also explain the importance of public debt. The following are the important objectives of public debt.

(1) *To fill the gap between expenditure and revenue:* - The government may borrow money from internal or external sources, whenever the income of the government falls short of its expenditure. Even to meet unforeseen calamities like floods and famines, a government may borrow.

(2) *To overcome depressionary tendencies:* - Depression refers to a situation of falling prices, inadequate aggregate demand, decline in production, output, unemployment, slackness of productive activities and to hope for profitability in the economy. Under these circumstances government can revive economic activities by increasing public expenditure. To meet this expenditure government has to raise loan. Now public expenditure would increase the effective demand through the combined operation of multiplier and accelerator.

(3) *To Contain Inflation:* - Inflation refers to a situation of continuously rising prices. It is a known fact that continuous hyper inflation is a threat to the development process and it destroys all incentive for development. Under these circumstances government can withdraw a large amount of money and purchasing power from the public through fresh public loans.

(4) *Financing Economic Development:* - Almost all developing countries are suffering from shortage of funds and in these countries resource mobilization through taxation has its own

limitations. Under these circumstances, government can resort to both internal and external sources to give a big push to the economy. In this case, public borrowings are used as a source of capital formation.

(5) *To met unprecedent expenses:* - To manage the situation of emergencies and natural calamities like floods, famines, earthquakes, epidemics etc. government has to resort to public borrowings. During this period there will be sudden spurt in expenditure and to meet this huge expenditure governments generally raise loans.

(6) *To minimize cyclical fluctuations:* - Normally economic activities are subject to cyclical fluctuations, generally wide and violent fluctuations lead to many disastrous consequences. Debt policy is an important tool in the hands of government for minimizing the fluctuations.

(7) *To met War finance:* - In recent years internal and external disturbances have became common. Everyday there will threat to stability and integrity of the country. therefore national security is of utmost importance. As a result every country needs a huge amount to maintain its defense services and protect the country from external aggression. Further modern warfare also requires huge amounts of money and they cannot be met by taxation alone. Therefore governments resort to public borrowings.

(8) *To finance public enterprises:* - In many Udcs, public sector is the engine of economic growth and this sector is directly under the control of the government. For financing and managing public enterprises which make up the public sector, governments need huge finance.

(9) *To direct the market forces:* - In many developing countries, private sector is relatively weak and therefore complete marketisation is not possible. As a result market forces are weak and they are unable to give proper signals for optimum allocation of resources. Under these circumstances government has to take upon itself the responsibility of optimum allocation and utilization of resources. For this government needs long term finance in adequate quantity and this necessitates public borrowings.

(10) *Creation of Infrastructure:* - Creation of infrastructure facilities is a necessary pre-condition to initiate the development process. But development of infra-structural facilities is a capital-intensive process and they are not remunerative. Hence private sector is not interested in the development of infrastructural facilities. It is obligatory on the part of the government to develop them and for this purpose massive investments are needed. Thus to finance infrastructure development projects modern governments need public borrowings.

20.6 Sources of Public Borrowing

Every government has two major sources of borrowing i.e. internal and external. Internally the government can borrow funds from individuals, financial institutions, commercial banks and the central bank. Externally, the government borrows from individuals and banks, international institutions and foreign governments. It may be mentioned that the exact effect of borrowing will depend in a large measure upon the source of borrowed funds. We shall consider these different sources briefly.

20.6.1 Borrowing from individuals

When individuals purchase government bonds, they are diverting funds from private use to government use i.e. by reducing their current consumption or private capital formation. Normally, the sale of government band should not curtail either consumption or capital formation.

20.6.2 Borrowing from non-banking financial Institutions

It is another important source of borrowing. They are insurance companies, trusts, savings banks. These institutions have huge funds with long maturity periods and by lending the same to the government, they can reduce their idle cash balances.

20.6.3 Borrowing from commercial banks

Individuals and non-banking financial institutions take up government bonds out of their own cash funds. But commercial banks can do so by creating additional purchasing power which is popularly known as credit creation. The banking system can make additional loans upto an amount several times as great as the excess cash reserves and required reserves ratio. Through this process commercial banks can subscribe to the government loans. A close examination of the working of this mechanism reveals that of creates inflationary pressures in the economy.

20.6.4 Borrowing from the Central Bank

The central bank of the country can subscribe to government loans. The mechanism is similar to the system of creating purchasing power by commercial banks. The central banks credit the account of the government by purchasing government bonds. It should be noted that the borrowing from the central bank is the most expansionary of all the sources.

From the above discussion it is clear that borrowings from individuals and non-banking financial institutions means merely transfer of funds and purchasing power from private sector to government and so they will not be expansionary in their effect on the economy.

20.6.5 Borrowing from External Sources

Government may borrow from other countries, apart from borrowing from individuals and financial institutions within the country. The borrowings can be used to finance war expenditure or to buy defense equipment or to pay for the development projects or to pay off adverse balance of payments. In recent years international financial institutions like IMF, IBRD, IDA, IFC, ADB etc have emerged as important sources of borrowings. In the modern concept of economic development external borrowings have became an important source of finance particularly in the context of shortage of investible funds in the less developed countries.

Public Debt: -

20.7 Money creation Versus Borrowing from the Public

The net demand for resources by the government is measured by the primary deficit. It is the same thing as the deficit calculated by ignoring borrowing and interest payments. The central government must borrow when it runs a deficit. The deficit must be financed, which means that somehow the government must obtain the funds to meet its expenditure when its receipts fall short of those expenditures.

Financing a deficit by money creation is expansionary than borrowing from the public. The resulting increase in the money supply is likely to increase the price level over the long run.

The Central Government is unlikely to actually print new currency if it chooses to finance a deficit by money creation because, like most households and business firms, it pays for most of its expenses, by cheque. Monetisation of the deficit occurs whenever the Reserve Bank of India expands the monetary base to finance the deficit.

Monetising the central deficit creates two major problems. First, the deficit contributes to an increase in aggregate demand, because it allows an increase in government purchase without a corresponding increase in taxes. Second, monetising the deficit contributes to an increase in the many supply which results in downward pressure on the level of interest rates and upward pressure on the equilibrium money stock. The decrease in interest rates and consequent increase in private investment expenditure then add further to aggregate demand. Therefore, monetising the deficit is likely to result in upward pressure on the price level, unless the country is in a deep recession.

Because of the inflationary effects of financing a deficit by money creation, the central bank is careful not to monetise the deficit. The Central Government borrows by issuing Treasury bills and bonds. When it borrows from the public, it must complete for available loanable funds and this places upward pressure on interest rates. Under these circumstances, the central bank does not interfere and therefore does not increase the money supply to finance the deficit.

The effect of borrowing from the public is less expansionary than the effect of directly monetising the deficit. When the public purchases government securities, a portion of loanable funds available from saving is allocated to make loans to the Central Government. When the Central Government borrows in this way, there will be no increase in bank reserves and consequent expansion of the money supply. However, the impact on aggregate will be more expansionary than it would be if taxes instead of borrowings were used to finance the deficit. Borrowing does not reduce disposable income, while taxation does. In effect, borrowing to cover a Central budget deficit postpones the payment of taxes and also makes the government to pay interest on the debt to the people who acquire government bonds.

20.8 Economic Effects of Public Borrowing and Public Debt

We should clearly distinguish between economic effects to public borrowing from economic effects of public borrowing from economic effects of public debt. Borrowing refers to the method of securing funds, and it is one of the four alternatives available to the government the other sources being taxation. Profits from public enterprises and money creation. The effects of borrowing, therefore, refer to that programme of government expenditure financed by borrowing in contrast with the effect of a similar programme financed by taxation. On the other hand, the effects of public debt refer to the effects on the economy which are caused by the existence of public debt after it has been incurred.

20.8.1 Effects of Public Borrowing

When government expenditure is financed by public borrowing some general effects would be as follows:

- The transfer of funds from the public to the government is voluntary under borrowing.
- Loans do not reduce the wealth of the lenders, but merely change its form.
- Financing through taxation is more contractionary while financing through borrowing has more expansionary effect, because lending does not reduce consumption and wealth of the lenders and will not adversely affect the incentives for the business sector.
- In normal course, public borrowing does not reduce consumption, because lending to the government is voluntary and will be met out of saving.
- Government borrowing need not affect private investment adversely except under special circumstances. When borrowings are from commercial banks and central bank, it amounts to creation to additional purchasing power and therefore will not result in curtailment of funds available for investment. If it is at the cost of private capital formation, it adversely affects investment. The use of resources by the public sector means that the private sector is deprived of the use of these resources.
- Generally, public borrowing will not reduce the real incomes of those who have subscribed to government bonds. Further, when a large section of people benefit from such loan financed government programmes, there will be an increase in their real income.
- Foreign loans can influence both consumption and investment favourably.

20.8.2 Effects of Public Debt

Now let us discuss some important effects of public debt.

- The existence of public debt has an important effect upon consumption. The possession of government bonds may induce people to spend a larger percentage of their incomes. In same cases people may spend even in excess of their incomes since they can dispose of the bonds to pay for the excess expenditure.
- Public debt has an impact on the total money supply in the economy. Government borrowing from the central bank directly increases the money supply. Similarly borrowings from commercial banks also leads to monetisation of public debt.
- Public debt is represented by bonds which are highly negotiable and most liquid form of assets. Ina case of need, within no time they can be converted into ready purchasing power. Therefore it may induce more spending and create inflationary pressures in the economy.
- The ability to work and save will be increased when borrowed funds are used for productive purposes. If funds are used for the development of infra-structural facilities it will have favourable impact on production.
- The use of resources by the public sector means that the private sector is deprived of the use of these resources. Indirect crowding out occurs when the increase in government investment generally lead to an increase in interest rate that crowds out private investment which might have been more efficient and productive. Higher interest rate makes the investment more expensive and reduces its cost efficiency.

On the other hand, the existence of large public debts will force the government to maintain a low rate of interest in order to keep its interest obligations at the lowest amount possible. This may encourage borrowings and investment. Thus it is difficult to state clearly whether existence of public debt will encourage or discourage investment.

- Public debt involves transfer of purchasing power from one section of the society to another. Generally rich section of the society purchases government securities, but the burden of tax falls upon the common people. Thus public debt adversely affects the distribution of income.
- The public debt has little effect on resource allocation. Generally it curtails private investment activities. If hitherto efficiently utiized resources are shifted from private sector to public sector, then of affects allocative efficiency.
- Effects on national income depends on the net effect of the programme. If the bonds are purchased by central and commercial banks and debt is used to expand the production base, there may be a small induction in national income.
- Public debt has implications for the working of the private sector, money market and other constituents of the economy.
- When compared to internal debt, external produces strong impact on the economy.

20.9 Let Us Sum Up

- Generally public debt refers to loans raised by a government within the country and outside the country.
- There are a number of similarities and difference between public and private debt.
- Public debt can be classified into different types depending on source, nature, composition and magnitude.
- In recent years public debt has become an important fiscal instrument. Every government resorts to public borrowing with a definite set of objectives.
- Objectives of public borrowing explain the role and importance of public debt in the economy.
- The debate an money creation versus borrowing from the public has revealed that monetisation creates serious problems and causes mismatch between aggregate demand and aggregate supply. It produces inflationary effects. However, the effects of borrowing from the public are less expansionary.
- An analysis of economic effects of public debt reveals that the effects are mixed.
- Therefore the desirability of a particular operation of borrowing can be best judged by its effects.
- The effects of public borrowing should not be considered in isolation, but as a part of the fiscal and general economic policy of the government.

20.11 Key Concepts

(1) *Infra-structural facilities*: -A set of facilities like capital equipment, physical facilities like road, power, finance, marketing, information etc. which facilitate creation and substance of economic activities.

(2) *Aggregate Demand:* - The total spending of the economy which is made up of consumption, investment, government and net foreign expenditure. A rise in aggregate demand is a necessary condition for an increase in real output and employment,

(3) *Disposable Income:* - Personal income actually available for spending. This is total or grass income minus direct tax and social security contributions.

(4) *Allocative efficiency:* - Efficiency meahs getting any results or the maximum possible output from given resources or inputs. Allocative efficiency means allocating the available resources between economic activities so that it would not be possible more of some goods without producing less of any others.

(5) *Liquid Assets:* - Liquid assets or assets which are themselves money or can be converted into money with minimum delay and risk of loss. Short dated marketable securities such as Treasury bills are liquid assets.

20.10 Sell-Assessment questions

(1) What do you mean by public debt? Distinguish between public and private debt?

(2) Give an account of different types of public debt.

(3) Explain the objectives and importance of public debt in a developing economy.

(4) What are the different sources of public borrowing? State their relative merits and demerits.

(5) Discus the various effects of public debt and public borrowing.

(6) Give an account of the debate on money creation versus money borrowing from the public.

20.12 Further Readings

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UNIT 21: PRINCIPLES OF DEBT MANAGEMENT AND REPAYMENT

Structure

21.0 Objectives

21.1 Introduction

21.2 Meaning of burden of public debt

21.3 Burden of the Internal and External Public Debt

- 21.3.1 Burden of Internal Public Debt
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21.12 Limits of raising Public Debt

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21.14 Key Concepts

21.15 Self-assessment questions

21.16 Further Readings

21.0 Objectives

After studying this unit you should be able to understand

- the meaning of the term burden of public debt and debt burden of internal and external debt,
- the debate relating to shifting of debt burden to future generation,
- meaning and importance of public debt management,
- the objectives of and issues in public debt management with reference to the LDCs
- the importance of public debt redemption and various methods of debt redemption and
- determining the safe limits of raising public debt.

21.1 Introduction

In recent years a keen debate is going on the question of public debt burden. The classical philosophy of laissez faire equated a sound budgetary policy with that a private budgeting. Just as a private economic unit cannot and should not seen into persistent deficits, similarly the government should avoid repeated deficits and consequential public debt. Excessive and continuous public debt imposes heavy burden on the economy. But in recent years public debt has become in dispensable. Therefore it is necessary and also interesting to know more about the nature and incidence of debt burden and ways and methods of debt management and debt redemption. These aspects constitute the subject matter of this unit.

21.2 Meaning of Burden of Public Debt

Before analysing the burden of public debt, it is essential to know the meaning of burden of public debt. In simple words, it refers to the sacrifice and effects on the community through a rise in taxation at the time of repayment and for paying the annual interests on the government loans. In other words, every government is bound to repay the public borrowings whether internally or externally with interest.

Here distinction should be drawn between financial burden i.e. primary burden and real burden i.e. secondary burden Regarding financial burden David M.C. Wright observed that "the national debt is to be measured by the effects of the interest charges and the taxes levied to meet them. The relation which the taxes for interest bear to the national money income is the question of primary importance. "Therefore, when a debt is incurred by the government, the level of taxation has to be raised in order to meet the interest charges, and the income of the people is transferred to the government and such a loss in the income of the people can be called a financial or primary burden of public debt.

Similarly, real burden or secondary burden implies that higher level of taxation due to heavy public debt has deep repercussions in the form of adverse effects on the capacity and willingness to work and save.

There are many options regarding the burden of public debt

- The nature of the burden of an internally held public debt is different from that of an externally held debt. In the case of the former, the money remains within the country, but in the case of the latter, the money goes out of the country.
- Public debt is a burden because its repayment through progressive taxation would substantially restrict investment and lower national income.
- According to Domar, the burden of public debt should be defined as a ration of total debt to total national income. Depending on the value of the ratio, the burden may go up, or down or may remain constant.
- Public debt imposes a burden if the tax collected to repay it adversely affects savings, investments, work efforts and risk taking activities.
- The higher the interest rate on bonds the higher is the burden of public debt when it is bond financed.
- A large amount of public debt may create inflation in the economy and may therefore, create burden on the people not only through higher prices of goods but also through inequalities in income distribution.

21.3 Burden of Internal and External Public Debt

Now let us make an attempt to differentiate between the burden of internal and external public debt. First let us focus on the burden of internal debt.

21.3.1 Burden of Internal Public Debt

In the case of an internal debt, there is no direct money burden on the community as a whole. Because the payment of interest and taxation to meet the same involves simply a transfer of purchasing power from one group of people to other group. To that extent the net burden will be constant. But when we view the distribution of burden between different income groups, it becomes clear that there will be disproportionate distribution of burden.

Further, a loan meant to finance a productive enterprise will be paid out of the profits of the investment. Therefore, it may not involve any burden on the community. In addition to this, the real burden of public debt will depend upon the type of people who own the bonds and who receive interest payments and the type of people who pay the taxes. The real burden of the debt repayment will be definitely much more than is thought of at first sight. For e.g. the government may tax enterprising, active and hard working for the benefit of the passive old and leisurely class. Form this it will be clear that internal public debt imposes both money and real burdens. Thus the argument that internal public debt imposes both money and real burdens on a country's economy is theatrically unsound and practically unrealistic.

In brief it imposes direct money burden i.e. the amount of goods and services sacrificed by the people due to rise in taxes, indirect money burden i.e. increases in the prices of goods and services due to creation of new demand, direct real burden i.e. imposition of new taxes on people to repay the loan

along with the stipulated interest and indirect real burden i.e. in the form of imposition of indirect taxes which widens economic disparities and inequalities.

21.3.2 Burden of External Public Debt

External debt means the money borrowed from individuals, associates belonging to foreign governments. The burden of external debt can also be discussed under four headings i.e. direct and indirect money burden and direct and indirect real burden.

Direct Money Burden: In an effort to pay the loan and interest, the debtor nation is deprived of certain goods and services. Every year the borrower country has to pay huge amounts as interest. After the maturity period, the principal has to be paid in the form of foreign exchange. This is possible only through making exports without getting any payment from foreign countries.

Indirect Money Burden: The debtor nation often pays interest in terms of goods and services i.e., exports to the creditor country. It may be at the cost of domestic consumption. It means loss of economic welfare.

Direct Real Burden: According to Prof. Dalton, "direct real burden is measured by the loss of economic welfare which these payments involve to members of the debtor community." The debtor government imposes new taxes on the people to pay off the external debt. It is obvious that the burden of these taxes fall more on the weaker section of the society. Hence it is the direct real burden of external public debt.

Indirect Real Burden: The taxes imposed by the debtor country to pay off the external debt adversely affect the willingness and ability of the people to work and save. It adversely affects domestic production, output, employment and income.

21.4 Debt Burden and Future Generation

A detailed discussion about the burden of public debt gives rise to a relevant question i.e., whether a public debt burden is borne by the generation which creates the debt, or instead is passed on to future generation. The classic economic viewpoint regarding the intergeneration transfer of debt burdens holds that a debt burden rests largely with the present generation which creates the debt. It may be shifted to future generations only if the present generation reduces its rate of saving as the result of the debt creation activity. This argument which resends from David Ricardo, was stated brilliantly by P.C.Pigon and later adopted to Keynesians, terms by economists such as Abba Lerner and Paul Samuelsan.This orthodox opinion as been challenged by James Buchanan and numerous other scholars.

While considering all these theories we have to notice that the term burden has been differently interpreted by different economists. To the Keynesians, it is related to the use of resources, whereas for Buchanan it is concerned with a type of disutility arising situation out of coercive taxation for the repayment of public debt.

The classical theory of public debt assumes full employment and unproductiveness of public expenditure. Therefore it holds the view that the primary burden falls on the present generation and it is measured in terms of a decline in the output in the private sector due to a transfer of resources embodied in the government loans to the public sector.

Keynesians argue that when there is underemployment in the economy, government borrowings will not encroach upon the resources available to the private sector. Hence, the output in the private sector will not be reduced, so there is no primary burden of debts in the present as such. On the contrary, when effective demand increases an account of government spendings, the investment function in private sector may increase and as a result output may rise further.

Recently Prof. P.M.Buchanan has put forward a thesis i.e.Welfare Attitude Theory that the primary burden of public debt is always to posterity. In his opinion, the concept of primary burden should be interpreted in terms of the individual attitudes towards their economic well-being rather than in terms of changes in the private sector outputs. He thus argues that when a project is financed through borrowings, the subscribers to the government loans do not suffer any burden, because they do not feel any adverse changes in the economic well-being at that time. Their subscription being voluntary, they just make a rational choice in favour of holding wealth in terms of less liquid government securities instead of liquid assets. Naturally it does not involve any burden of sacrefice.

However, in future,when the debt is rapid by taking the posterity, the resources are transferred from tax-payers to the bond-holders, so that the tax-payers feel themselves worse-off. Interestingly the bond- holders are not better off since they just exchange their bonds from cash. The net effect is, the posterior community because worse off to the extent of disutilities experienced by the taxpayers. In this sense, Buchanan concludes that the burden of public debt is shifted to posterity.

Prof. R.A.Musgsave in his theory i.e., Inter-Generation Equity Theory has given more convincing explanation to the question of debt burden and future generation. The entire analysis revolves around the choice between loan finance and tax finance financing a public investment project. He does not find much justification in searching for reaction of the present generation to tax finance or loan finance. He develops the thesis on the justification that the cost of the public investment project should be borne by the users in proportion to the benefit enjoyed. He makes out a case for loan finance because it distributes the cost of the project among beneficiary generations exactly in proportion to benefit enjoyed by them. Such intergeneration equity is never possible through tax finance.

In brief it can be said that public debt will put a burden on future generation under two conditions. They are:

- When the current generation does reduce its savings and
- When the government does not add to the capital stock and productive capacity of the country.

While analyzing this problem different economists have made alternative assumption regarding the response pattern of the private sector and expenditure policy of the government, therefore they have reached non identical conclusions. The thinking on the possibility of shifting debt burden to the future generations ignores the economic implications and ill effects of the debt trap in which the government may find itself. This is the manifestation of a real burden which is worth avoiding.

Now let us proceed further and focus on debt management.

21.5 Debt Management

Debt management is set of principles pertaining to the management of either external or internal debt, or both i.e., formulation and implementation of a debt policy designed to achieve certain objectives. According to the traditional philosophy, debt management consisted of keeping its interest cost to the minimum possible and paying it off as early as possible. However a modern welfare state uses debt management as a policy tool for achieving various social-economic objectives.

21.6 Objectives Of Public Debt Management

The important objectives of debt management are as follows:

- To subserve as an economic policy of the government. During the period of depression it should help to raise the purchasing power and effective demand in the economy and vice-versa during inflation.
- To provide sufficient revenue to meet the requirements of the economy and also requirements during emergencies.
- To facilitate and support the activities of the government i.e., stabilization, growth, employment and overall soundness of the financial system.
- Not to produce any adverse effect on the economic condition of the economy.
- To strengthen the working and activities of the money market.

21.7 Need For Public Debt Management

Now, the question is why is the public debt management Necessary? One cannot deny the fact that for the proper utilization of public debt and to considerate it's positive effect on the economy debt management is necessary. The other justifications are:

- Debt policy and debt management policy play an important role in the formation of economic policy of the country.
- Economic development of a nation is sensitive to changes that occur in the nature, composition, extent and utilization of public debt.
- Public debt management is necessary to determine the conditions which are essential for the implementations of planning policies.
- To understand the economics of public debt.
- To accommodate the interest of different types of investors. By providing different types of debt portfolios, the treasury can prevent over concentration of debt to a particular type of investor.
- To secure the maximum possible co-ordination of fiscal and monetary policies.

21.8 Issues In Debt management

(1) It should be noted that there should be perfect harmony between debt management and monetary management in the country. They both influence stabilization and economic growth. Open market operations are usually conducted by sale and purchase of government securities. Through general and selective credit controls, monetary management in the country. They both influence stabilization and economic growth. Open market operations are usually conducted by sale and purchase of government securities. Through general and selective credit controls, monetary policy tries to influence the

volume and flows of funds and thereby the working of the entire economy. This issue relates to integrating debt management with monetary management.

(2) This issue relates to minimization of interest cost on debt, so that burden on the economy is less. But the problem is how to determine interest rate structure without affecting broader economic goals? Such a policy move can come into conflict with the anticyclical monetary policy.

(3) The aggregate volume of outstanding debt reflects a cumulative effect of budgetary policy of the government. The volume of debt increases or decreases in line with deficit or surplus budgeting. But monetary policy can aim to alter the volume and composition of money and credit without any such constraint. In the case of public debt, the management part would mainly consist of changing its maturity composition so as to affect its yield structure and liquidity content. But it must be reiterated that monetary policy and public debt are closely linked.

(4) In a big country with federal structure of governments, these can be inter-governmental problems of co-ordination. Normally, the Central Government is able to borrow at lower rates than the state governments. There should be co-ordination in respect of the interest rate, time of entering the market, form of the issue of public securities, decisions relating to the ownership of the bonds, proper adjustment of maturity etc.

21.9 Debt Management and Third World Countries

For many poor countries, the burden of external debt has been back breaking and interest payment every year is a serious national problem. In order to minimize the problem, the Baker Plan in 1985 suggested increased liquidity to the debtor countries through fresh lending by commercial creditors, debt scheduling and supports by international financial institutions. In 1989 Brady plan emphasized interest rate reduction, market based debt swapping, conversion of bank debt to government bonds and debt bay bank provisions. Some of the countries resorted to emergency borrowing from the international financial institutions and other friendly countries at lower rates of interest.

The inducement to increase the inflow of private capital can be an important plank of debt management. But it requires several prerequisites to be fulfilled i.e. high degree of politico-economic stability, supply of cheap labour, absence of strong trade unions, high interest rate and so on. In the newly industrializing economics, debt management did not become so difficult mainly because of a high rate of economic development fostered by a large amount of direct foreign investment. But the outflow of hot money and short term capital since July 1997 most of these economics came back again under the grip of debt crises.

Therefore, effective management of foreign debt is an important constituent of sound macroeconomic management. It would be wrong to frame fiscal and monetary policies independently of the effect on the level and structure of debt. Therefore proper management and regulation of foreign debt is absolutely necessary.

21.10 Redemption Of Public Debt

Having analysed the role and importance of public debt management particularly in the context of developing countries, we can turn our attention to redemption i.e., repayment of loan.

Redemption of public debt means repayment of a debt. Public debt is to be repaid by the government within the time limit along with the stipulated rate of interest. It is better to repay the loan as soon as possible because mounting public debt has very serious implications for the economy and people. If government fails to repay the loan it will lose its credit worthiness and cannot raise new loans as and when circumstances warrant. Proper debt redemption has some advantages. Some of them are listed below.

(i) It saves the government from bankruptcy,

(ii) It exercises a sort of check on the recklessness of the government.

(iii) It sustains public confidence, especially of potential lenders, in the governments credit worthiness.

(iv) It enables the government to float loans easily in future.

(v) It saves the cost of debt administration and the cost of collecting taxes to service the debt.

(vi) It helps in sustaining a healthy climate for the private sectors investments.

(vii) It can also serve as a deflationary measure. For eg. When rate of taxes is raised to meet debt servicing, aggregate consumption expenditure might be curbed to same extent.

(viii) It saves the posterity from shouldering the burden of debts.

Therefore every government should make serious attempts to repay the loans.

21.11 Methods of Debt Redemption: -

21.11.1 Internal Debt Redemption

There are different methods of debt redemption. Some of them are as follows:

- Repudiation of debt
- Conversion of loans
- Utilization of budgetary surplus
- Terminal annuity
- Refunding
- Compulsory reduction in rate of interest
- Additional provision of taxation
- Year-wise partial repayment
- Sinking fund
- Capital levy

(i) Repudiation of Debt: -

Redemption is quite distinct from repudiation. Repudiation means refusal to pay a debt by a state. It is an extreme form of clearing public debts, which constitutes a breach of contract when the government willfully flouts its obligations. Repudiation thus causes a loss of public confidence in the government. It would disable the state in floating further loans. In the case of external debts, repudiation

may provoke economic blockade, military action etc by the creditor state against the debtor state. Normally, therefore a government does not repudiate its debts. It is forced to resort to this measure only under exceptional circumstances.

(ii) Conversion of Loans

It means that an old loan is converted into a new loan. Under this system, a high interest public debt is converted into a low interest public debt. When there is a fall in the market rate of interest, the government gives notice to the renders to take their money back, so they are compelled to accept the lower rate of interest. The government borrows more money to pay such debts at low rate of interest and pay to the lenders. In this way, the debt is not liquidate for ever, but high burden is replaced by a low burden.

(iii) Utilization of Budgetary Surplus

When there is a budgetary surplus, the same can be utilized for paying the debt. But in recent years due to ever-in-creasing public expenditures, surplus budget is a rare phenomenon. Moreover, heavy taxes have to be imposed for realizing a surplus deficit, which may produce undesirable consequences. When public expenditure is reduced for creating a surplus budget, a deflationary bias may develop in the economy.

(iv) Terminal Annuity

In this method, government pays off the public debt on the basis of terminal annuity into equal annual installments including interest along with principal amount. This is the convenient way of paying off the public debt with the passage of time, burden of debt goes on decreasing and at the time of maturity, most of the amount is paid off. This method is similar to that of the sinking fund.

(v) Refunding

Refunding of debt implies the issue of new bonds and securities by the government in order to repay the matured loans. In the refunding process, usually short-term securities are replaced by issuing long term securities. Under this method the money burden of public debt is not relinquished but it is accumulated owing to the postponement of debt redemption. Usually, this method is restored to at such a time when the burden is too heavy on the government and it is not in a position to raise funds from other sources.

(vi) Compulsory Reduction in Rate of Interest

Another method of debt redemption is the compulsory reduction in rate of interest. During the period of financial crisis, rate of interest is unilaterally reduced on the basis of compulsion. This method cannot adopted in the ordinary circumstances of the country.

(vii) Additional Provision of Taxation

Generally, new taxes are imposed to collect the revenue. These funds can be utilized to repay the loans as well as interest. With this method, redistribution of income can easily be transferred from tax payers to the hands of band-holders. It may also impose a burden on the future generation if new taxes are levied to repay the long term debts.

(viii) Year-wise Partial Repayment

This is a method by which a part of debt is repaid every year from the budget revenues so that the total debt is paid off after some years. But one difficulty is that the budget should be surplus every year to do this otherwise, either fresh loans have to be floated in order to clear a part of the old debt or other expenditure programmes have to be sacrificed.

(ix) Sinking Fund

A sinking fund is a fund created by the government and gradually accumulated every year by setting aside a part of current public revenue in such a way that it would be sufficient to pay off the funded debt at the time of maturity. Perhaps, this is the most systematic and best method of redemption.

Sinking fund in essence is like a depreciation fund prudentially created. Under this method, the aggregate burden of public debt is least felt. Because the burden of taxing the people to repay the debts is spread evenly over the period of the accumulation of funds. The practice of a sinking fund inspires confidence among the lenders and the government's creditworthiness increases thereby.

(x) Capital Levy

This method has been the most controversial method of debt repayment. Capital levy provides for imposing "all at once" tax on all the capital value possessions of the people. It refers to a very heavy tax on property and wealth. Capital levy is strongly recommended by Dalton as a method of debt redemption with least real burden on the society. In fact capital levy was advocated immediately after World War I to repay the unproductive war debts. Though there are same advantages, the imposition of a capital levy for debt redemption is opposed on several grounds like of may depress capital values, demoralize public confidence, discourage the flow of foreign capital, destroy all incentives for savings, investment, asset creation etc. Above all its creates many administrative difficulties. Thus, though capital levy is a quick and equitable method of debt redemption, it is not advisable in prefernce to other methods.

21.11.2 Redemption of External Debt

The redemption of external debt may be made bu way of accumulating the necessary foreign exchange to pay for it. Adequate investments should be made in those industries which have high productive and export potentialities. However, temporarily redemption of an old debt can easily be made by the floating of new loans.

From the above discussion it is clear that every method has its own merits and demerits. But the most advisable method is to redeem a part of the public debt every year, so that the debt burden may not increase.

21.12 Limits of Raising Public Debt: -

We noticed that in many countries public debt has registered a continuous upward trend during the last few decades. Therefore the question is are there any definite limits beyond which a government cannot raise loans and add to its outstanding debt obligations? Though there are no such limits, every government should make some serious attempts to reduce the volume of public debt. In this regard the following suggestions may be considered.

a) Governments should not resort to public debt for indulging in wasteful expenditure. The government should abide by a self-imposed limitation that all borrowings must be for public purposes.

b) In some cases there could be legal restrictions on public borrowings.

c) In case of an emergency it may borrow and try to keep the interest cost low by concentrating on short maturity loans.

d) In the long run, the total volume of public debt can increase gradually in line with the growth in national income and credit structure.

e) A line of thinking propounded by Gurley and Shaw and Radichiffe Committee emphasis the important role played by public debt. At the same time they have suggested to regulate and ensure the best utilization of public debt.

f) A fear is expressed that unless restricted by some measures, government may resort to excessive borrowing and get into a debt trap. Therefore there is every justification to avoid unnecessary and excessive borrowing.

21.13 Let Us Sum Up

- Burden of public debt refers to the sacrifice and effects on the community through a rise in taxation at the time of repayment.
- On various ground we can make out a strong case for reducing the burden of public debt.
- Burden transfer to future generation is a debatable issue and the entire issue has to be viewed in the context of intergeneration equity, capital formation, consumption pattern and distributional equity.
- In view of the adverse implications of burden of public debt there is every justification for public debt management.
- The policy of public debt management should be in conformity with monetary and fiscal policy and general economic policy.
- Debt management particularly external debt management is a serious problem of the third world countries.
- Debt redemption means repayment of public borrowings and these are different methods of debt redemption.
- The different methods have their own merits and demerits, therefore government should be cautions while selecting a method of debt redemption.
- The best method is to redeem a part of debt every year, so that debt will not became a problem.
- Above all governments should be cautious while resorting to public debt and should ensure its prudential and efficient utilization.

2.14 Key Concepts

1) Maturity Composition

Maturity refers to the date when a security is due to be redeemed. The further any security is from maturity, the more its market value is liable to fluctuate if there are changes in the rate of interest; the nearer to maturity, the more stable its market price. A governments loan composition thus may have different maturity periods.

2) Yield Structure

Yield refers to the income from a fixed interest security as a percentage of its price. The nominal yield is the interest per annum divided by the par value. A gold structure indicates yields on fixed interest securities against their time to maturity.

3) Debt Crisis

Inability or unwillingness of major debtors to service their debts or serious fears of this. This is most likely to happen when debts are large, and interest rates rise or the economy slumps.

4) Debt Service

The payments due under debt contracts. This includes payment of interest as it becomes due and redemption payments where debt is long-dated a large proportion of debt service consists of interest payments where debt is short-dated, most debt service consists of redemption payments.

5) Debt Rescheduling

It means a revision of a debt contract, by which interest and redemption payments are deferred to later dates than those originally agreed. Rescheduling is generally accepted by lenders because the alternative may be outsight default and the consequent requirément to write it off in their own accounts.

21.15 Self assessment questions

(1) Explain the concept public debt burden? Show how debt becames a teal burden in a community.

(2) Given an account of internal and external public debt burden.

(3) Whether the burden of public debt can be shifted? is so how?

(4) Justify the need for public debt management.

(5) Explain the objectives of public debt management? Highlight the major issues in debt management.

(6) Examine the need for public debt redemption.

(7) What are the different methods of public debt redemption?

(8) Can a country became bankrupt? What are the safe limits of public debt?

21.16 Further Readings

1) R.K. Lekhi, "Public Finance", Kalyani Publishers 2002.

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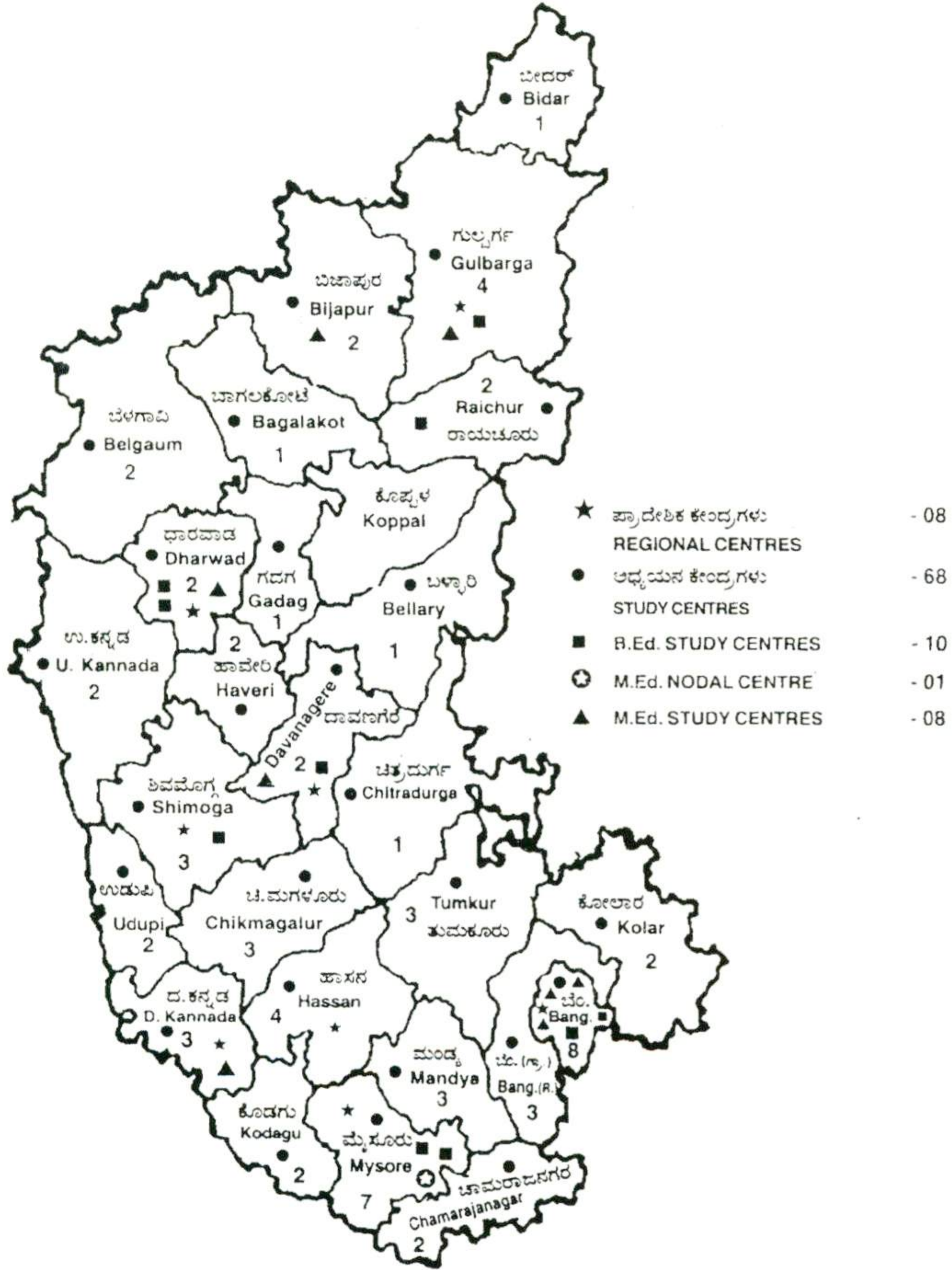
NOTES

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮುಕ್ತ ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಪ್ರಾದೇಶಿಕ ಹಾಗೂ ಅಧ್ಯಯನ ಕೇಂದ್ರಗಳು
Regional and Study Centres of Karnataka State Open University



(ನಮೂದಿಸಿರುವ ಅಂಕಿ - ಜಿಲ್ಲೆಯಲ್ಲಿರುವ ಒಟ್ಟು ಅಧ್ಯಯನ ಕೇಂದ್ರಗಳ ಸಂಖ್ಯೆಯನ್ನು ಸೂಚಿಸುತ್ತದೆ.)
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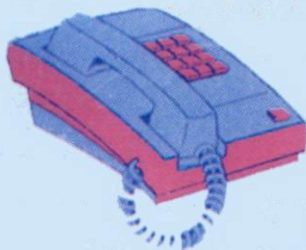

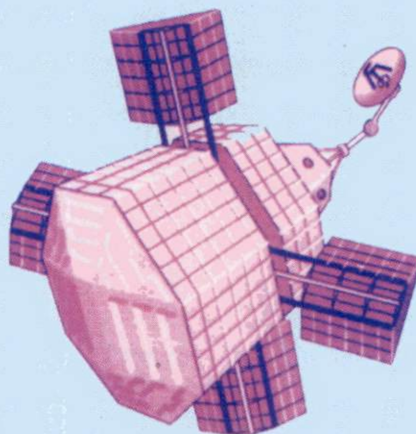

Feedback : improvement, revision and launching of new programmes
Unsystematic Feedback
Systematic feedback
Multimedia learning material
Self-instructional print material
Electronic media learning component
Broadcasts - radio, television & teleconferencing
Students affairs cell
Optional
Academic
other support
Obligatory
Continuous evaluation
Evaluation - methods and system
STUDENT
INSTRUCTIONAL SYSTEM