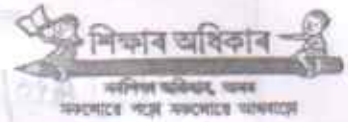


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TAX RATE SCHEDULE :

1. Progressive Taxation :

Progressive tax rate implies that rate of tax increases with every increase in income. Larger the income, higher being the tax rate. It means that tax liability increases more than in proportion to increase in income.

Table : Progressive Tax Rate Schedule

Tax base (income)	Average tax rate (percent)	Tax liability	Change in tax base	Change in tax liability	marginal tax rate
Rs. 1000	5%	Rs. 50	Rs. 1000	Rs. 50	$\frac{50}{1000} \times 100 = 5 \text{ per.}\%$
Rs. 5000	7%	Rs. 350	Rs. 4000	Rs. 300	$\frac{300}{4000} \times 100 = 7.5 \text{ per.}\%$
Rs. 10,000	10%	Rs. 1000	Rs. 5000	Rs. 650	$\frac{650}{5000} \times 100 = 13 \text{ per.}\%$
Rs. 20,000	15%	Rs. 3000	Rs. 10,000	Rs. 2000	$\frac{2000}{10,000} \times 100 = 20 \text{ per.}\%$

$$\text{marginal tax rate} = \frac{\text{change in tax liability}}{\text{change in tax base}} \times 100$$

When tax base increases from Rs. 1000 to Rs. 5000 and to Rs. 10,000 and Rs. 20,000, the progressive tax rate (average tax rate) also increases from 5% to 7%, and to 10% and 15%.

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Here, marginal tax rate will be more to that of average tax rate. As a result, marginal tax rate curve lies above average tax rate curve, both the curves will slope upward.

Fig: Explain

As shown in the figure, when tax base increases from OM to OM_1 , the progressive tax rate increases from AM to A_1M_1 , which is larger by the amount A_1B .

In the same way, when the tax base increases to M_2 , tax rate increases by A_2B_1 amount and when tax base increases to OM_3 , progressive tax rate increases from A_2M_2 to A_3M_3

which is larger by A_3B_2 . Thus, each unit of increase in the tax base brings larger rates of tax.

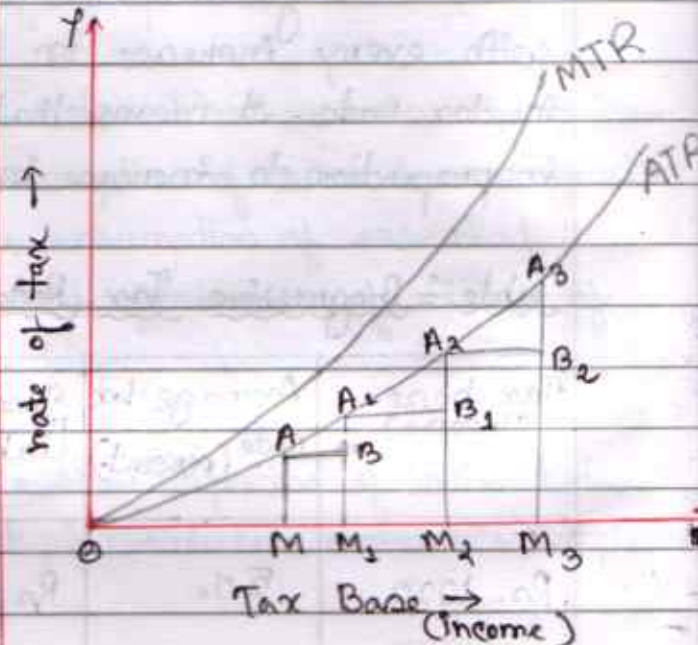


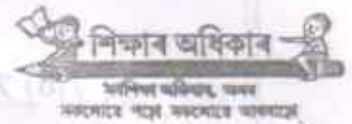
Fig:

Merits:

- ① In case of under progressive tax, if the rich pay taxes in larger proportion, then the govt. will have larger funds to invest for the welfare of the poor.
- ② Difficulty and cost of collection of taxes will be comparatively less in this system.

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② Progressive taxation is able to release larger resources to financed increasing public expenditure by cutting heavy consumption of luxuries.

2. PROPORTIONAL TAX RATE :

It refers to that system of taxation under which each tax payer pays the same rate of tax whatever is his income. It means that the ratio of tax liability to tax base remains the same. In other words, every tax payer under proportional tax system pays a fixed proportion of his income.

Table : Proportional tax rate schedule

Tax Base	Average tax Base (%)	Tax liability	Change in tax base	Change in tax liability	marginal tax rate (%)
1000	10	100	1000	100	10
3000	10	300	2000	200	10
6000	10	600	3000	300	10
9000	10	900	3000	300	10

Since, the ratio of tax liability to tax base remains constant, the average tax rate and the marginal tax rate will be the same.

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Fig. Explain

The tax rate is fixed at t and the rate remains the same for T_1 and T_2 tax base. The proportional tax rate schedule became a horizontal straight line where marginal tax rate is equal to the average tax rate.

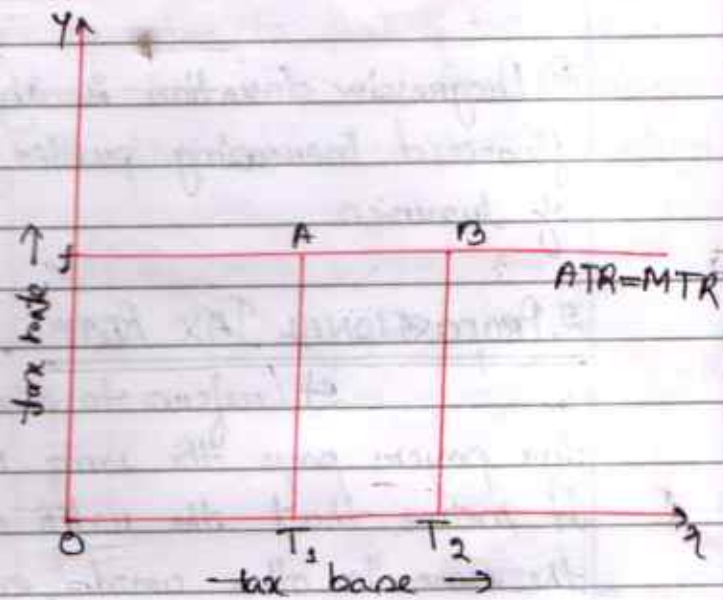


Fig:

Merits:

- (i) Since the rate remains fixed at different levels of income, it does not hamper the work culture of any tax payers unlike progressive taxation.
- (ii) This tax system is simple and uniformly applicable. The tax can be administered relatively easily.
- (iii) Proportional tax is free from the harmful effects like disincentive to saving and productivity which is associated with progressive taxation.

Demerits:

- (i) Since the rate at tax remains the same for different groups it becomes unjust and not wise to reduce the gap between the rich and the poor.

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(ii) This principle is not based on ability to pay as all sections of a society are subjected to same rate of tax.

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3. Regressive Taxation :

Regressive taxation is reverse to progressive taxation. Hence, regressive taxation refers to that system under which the ratio of tax liability to tax base decreases along with the increase in tax base. Larger the tax base, lesser being the tax rate.

Table : Regressive Tax Rate Schedule

Tax base (Income)	Average tax rate (%)	Tax liability	Change in tax base	Change in tax liability	Marginal tax rate
Rs. 1000	15%	Rs. 150	Rs. 1000	Rs. 150	$\frac{150}{1000} \times 100 = 15\%$
Rs. 5000	13%	Rs. 650	Rs. 4000	Rs. 500	$\frac{500}{4000} \times 100 = 12.5\%$
Rs. 10000	10%	Rs. 1000	Rs. 5000	Rs. 350	$\frac{350}{5000} \times 100 = 7\%$
Rs. 20,000	6%	Rs. 1200	Rs. 10,000	Rs. 200	$\frac{200}{10,000} \times 100 = 2\%$

When the tax base increases from Rs. 1000 to Rs. 5000 and to Rs. 10000 and Rs. 20,000, the average tax rate decreases from 15% to 13% to 10% to 6%.

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and to 40% and 6%. The marginal tax rates have remain at level lower than the average tax rates.

Fig. Explain When the tax base increases from OA to OB, the tax rate reduces from AL to BM. The marginal tax rate curve (MTR) lies below the average tax rate curve (ATR) as the fall in the tax rate becomes larger.

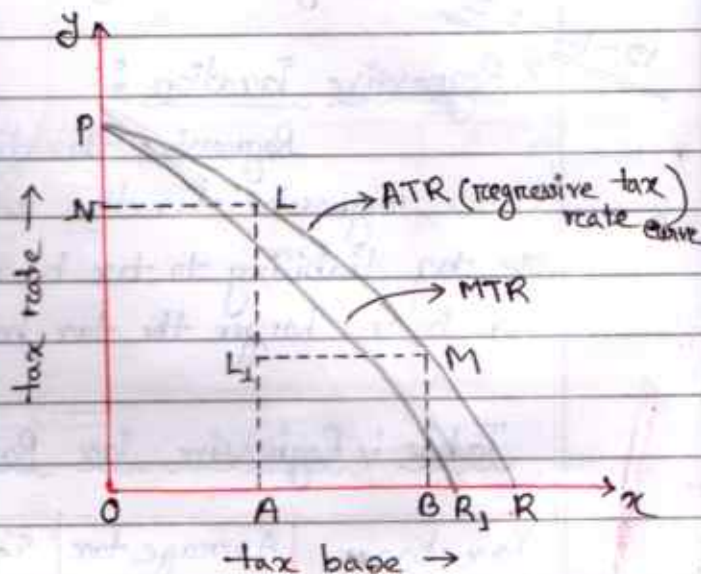


Fig: Regressive tax rate schedule

Merits:

- ① Since the rate of tax falls with the increase in income, it is an incentive to work an earnings of more income and hence a saving may be encouraged.
- ② Since the propensity to consume is very high in low income country where the majority of people are poor, these taxes can mobilized resources by reducing consumption of people.

Demerits:

- ① This system of taxation is highly injustice because the tax falls more heavily on the poor. It will widen the gap between poverty and prosperity.

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TAX RATE :

Tax rate can be expressed in two ways i.e. —

- ① Average tax rate (ATR)
- ② Marginal tax rate (MTR)

The term tax rate means the ratio of tax amount to tax base. Thus if tax base or income of an individual is Rs. 50,000 and tax payment is Rs. 5000, then the tax rate is 10%.

Average tax rate implies the amount of total tax liability per unit of tax base. The marginal tax base is given by the ratio of change in tax liability to change in total tax base.

Tax base (Income)	Average tax rate (%)	Tax liability	Marginal tax rate (%)
Rs. 1000	5%	Rs. 50	5%
Rs. 5000	7%	Rs. 350	7.5%
Rs. 10,000	10%	Rs. 1000	13%
Rs. 20,000	15%	Rs. 3000	20%

Table:

It is seen that the average tax rate is increasing as the tax base increases and the marginal tax rate remains above the average tax rate.

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1st fig. explain

A_t and M_t are average tax rate and marginal tax rate curves. When A_t is increasing, M_t will also increase and will lie above A_t . When tax base increases from OB to OC , the rate of average tax increases from BK to CM , while the marginal tax rate rises from BJ to CL .

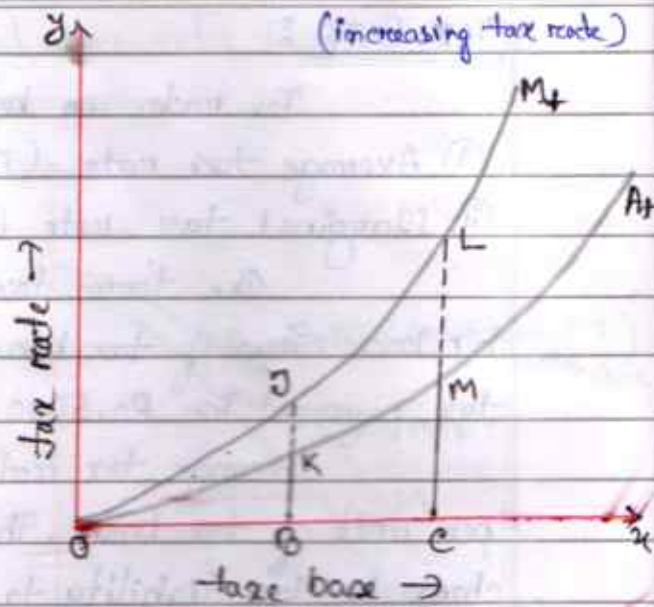


Fig: Relation between ATR and MTR in case of progressive taxation

2nd fig. explain

If average tax rate remain constant along with increase in the tax base, then the ratio of change in tax liability to tax base will also be constant and equal to ATR. When tax base increases from OD to OE , ATR and MTR remain equal to DN or EP .

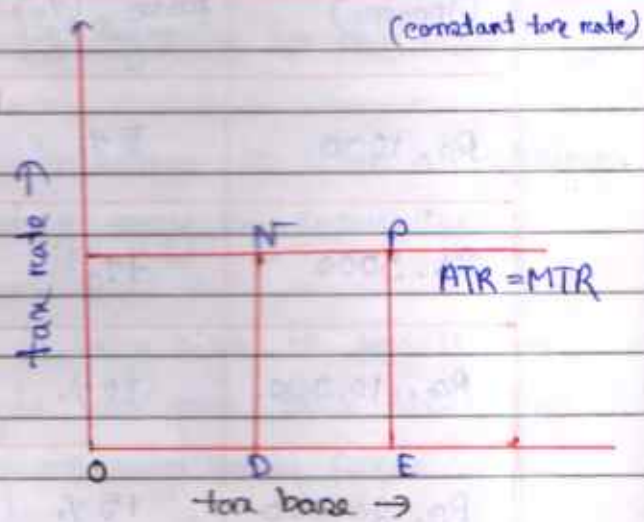


Fig: Relation between ATR and MTR in case of proportional tax rate

3rd fig. explain

If ATR falls as tax base increases, then the MTR will also fall. Here, A_t falls from FB to GS , and M_t falls from FR to GT , when tax base increases from OF to OG .

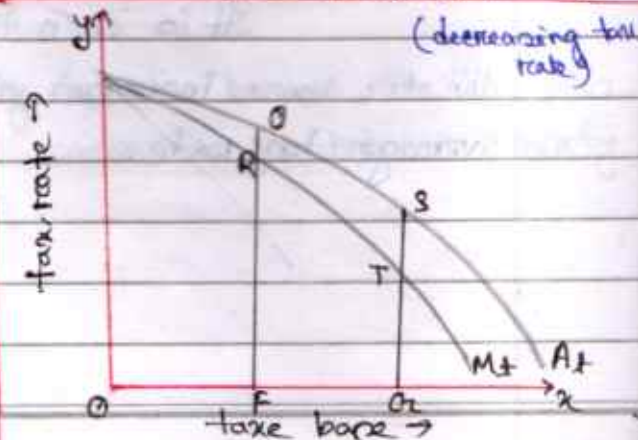


Fig: Relation between ATR & MTR in case of regressive taxation.