

Question 1. Explain why public goods must be providing by the government?

Answer : Public goods are refer to certain goods such as national defence, roads, government administration which cannot be provided through the market mechanism must be provided by the government. These goods are necessary for life and national development. Presence and supply of these goods can not be ignored An private sector enterprises do not take Interest In It because these goods are not more prolable. So, government supplied the public goods.

Question 2. Distinguish between revenue expenditure and capital expenditure

Answer

S.No	Revenue Expenditure	Capital Expenditure
1	It neither creates any assets nor reduce any liability	It either creates an asset or reduce a liability.
2	It is Incurred for normal running of governmental departments and various services	It is incurred mainly for acquiring assets and granting loans
3	It IS recurring In nature as day-to-day activities.	It is non recurring in nature
4	Its examnptessalary, pensron, Interest etc	Its examples repayment of loan, acquisttion of asset f!IC

Question 3. 'The fiscal deficit gives the borrowing requirement of the government'. Elucidate.

Answer Fiscal deficit refers to excess 01 government expenditure over its receipts exclusive of borrowing Thus, fiscal deficit points to borrowings requirement of the government to cope with its expenditure of he year Higher borrowing implies higher burden of repayments of loans and of Interest on the future genera lion As this burden mounts up, year after year, resource base future generation tends to shrink. This will definitely retard the process of future growth. Particularly, when borrowings by the government are used for non-productive purpose

Question 4. Give the relationship between the revenue deficit and the fiscal deficit.

Answer Revenue deficit is the excess of revenue expenditure of the government over its revenue receipts. Fiscal deficit is the excess of total budget expenditure over total budget receipts excluding borrowing. Fiscal deficit points to borrowing requirement of the government. As fiscal deficit mounts up, increasingly larger part of GDP is siphoned off to pay the existing loans.

Accordingly, resources available for revenue expenditure are reduced. Growth process is hindered. The government is once again compelled to take loans adding to its fiscal deficit.

Thus revenue deficit and fiscal deficit tend to push up each other.

Question 5. Suppose that for a particular economy, investment is equal to 200, government purchases are 150, net taxes (that is lump-sum taxes minus transfers) is 100 and consumption is given by $C=100+0.75Y$

- (i) What is the level of equilibrium income?
- (ii) Calculate the value of the government expenditure multiplier and the tax multiplier.
- (iii) If the government expenditure increases by 200, find the change in equilibrium income.

Answer

Given,

$$I = 200$$

$$G = 150$$

$$T = 100$$

$$C = 100 + 0.75Y$$

$$\bar{C} = 100$$

$$c = 0.75$$

(i) Equilibrium level of income

$$Y = \frac{1}{1-c} (\bar{C} - cT + I + G)$$

$$= \frac{1}{1-0.75} (100 - 0.75 \times 100 + 200 + 150)$$

$$= \frac{1}{0.25} (375)$$

$$= \frac{375}{0.25} \times 100 = ₹ 1500$$

(ii) Government expenditure multiplier

$$\frac{\Delta Y}{\Delta G} = \frac{1}{1-c} = \frac{1}{1-0.75} = \frac{1}{0.25}$$

$$\frac{1}{0.25} \times 100 = 4$$

$$\text{Tax multiplier} = \frac{\Delta Y}{\Delta T} = \frac{-c}{1-c}$$

$$\frac{-0.75}{1-0.75} = \frac{-0.75}{0.25} = \frac{-75}{25} = -3$$

(iii) New equilibrium income

$$\begin{aligned} & \frac{1}{1-c} [\bar{C} - cT + I + G + \Delta G] \\ &= \frac{1}{1-0.75} [100 - 0.75 \times 100 + 200 + 150 + 200] \\ &= \frac{1}{0.25} \times 575 = \frac{575}{0.25} = 2300 \end{aligned}$$

$$\text{Change in equilibrium income} = 2300 - 1500 = 800$$

Question 6. Consider an economy described by the following function: $C = 20 + 0.80 y$, $I = 30$, $G = 50$, $TR = 100$

(i) Find the equilibrium level of income and the autonomous expenditure multiplier in the model.

(ii) If government expenditure increases by 30, what is the impact on equilibrium income?

(iii) If a lump sum tax of 30 is added to pay for the increase in government purchases, how will equilibrium income change?

Answer

(i) Equilibrium level of income

$$\begin{aligned} Y &= \frac{1}{1-c} [\bar{C} - cT + I + G] \\ &= \frac{1}{1-0.80} [20 + 0.80 \times 100 + 30 + 50] \\ &= \frac{1}{0.20} [180] \\ &= \frac{180}{0.20} \times 100 \\ &= 900 \end{aligned}$$

Expenditure multiplier

$$\begin{aligned} \frac{1}{1-c} &= \frac{1}{1-0.80} \\ &= \frac{1}{0.20} \\ &= \frac{100}{20} = 5 \end{aligned}$$

(ii) Increase in government expenditure

$$\begin{aligned}
 &= \frac{1}{1-c} [\bar{C} + cT + I + G + \Delta G] \\
 &= \frac{1}{1-0.80} [20 + 0.80 \times 100 + 30 + 50 + 30] \\
 &= \frac{1}{0.20} [210] = \frac{210}{20} \times 100 = 1050
 \end{aligned}$$

(iii) Tax multiplier = $\frac{-c}{1-c}$

$$\begin{aligned}
 \frac{\Delta Y}{\Delta T} &= \frac{-c}{1-c} \\
 \Delta Y &= \frac{-c}{1-c} \times \Delta T \\
 &= \frac{-0.80}{1-0.80} \times 30 \\
 &= \frac{-80}{20} \times 30 \\
 &= -120
 \end{aligned}$$

$$\begin{aligned}
 \text{New equilibrium level of income} &= Y + \Delta Y \\
 &= 900 + (-120) \\
 &= 780
 \end{aligned}$$

Answer

$$\text{MPC} = 0.80$$

$$\bar{C} = 20$$

$$I = 30$$

$$G = 50$$

$$\text{TR} = 100$$

$$\Delta \text{TR} = 10$$

Equilibrium level of income

$$\begin{aligned}
 &= \frac{1}{1-c} [\bar{C} + c\text{TR} + I + G + \Delta \text{TR}] \\
 &= \frac{1}{1-0.80} [20 + 0.80 \times 100 + 30 + 50 + 0.80 \times 10] \\
 &= \frac{188}{20} \times 100 = 940
 \end{aligned}$$

$$\begin{aligned}
 \text{Change in income} &= 940 - 900 \\
 &= 40
 \end{aligned}$$

$$\text{Increase in lump sum tax } \Delta T = 10$$

$$\begin{aligned}
 \text{Change in income} &= \Delta T \times \frac{-c}{1-c} \\
 &= -10 \times \frac{0.80}{0.20} \\
 &= -10 \times 4 \\
 &= -40
 \end{aligned}$$

Conclusion Increase of 10% In transfers will raise the income by 40 and Increase of 10% In tax will lead to fall In the income by 40.

Question 8. We suppose that

$$C = 70 + 0.70 Y^D, I = 90, G = 100, T = 0.10 y$$

- (i) Find the equilibrium income.
- (ii) What are tax revenues at equilibrium income? Does government have a balanced budget?

Answer

$$(i) C = 70 + 0.70 Y^D$$

$$I = 90$$

$$G = 100$$

$$T = 0.10Y$$

$$Y = C + I + G$$

$$= 70 + 0.70 Y^D + 90 + 100$$

$$= 70 + 0.70 Y^D + 190$$

$$= 70 + 0.70 (Y - T) + 190$$

$$= 70 + 0.70Y - 0.70 \times 0.10 Y + 190$$

$$= 70 + 0.70 - 0.07Y + 190$$

$$= 70 + 0.63Y + 190$$

$$= 260 + 0.63Y$$

$$Y - 0.634 = 260$$

$$0.37Y = 260$$

$$y = 260 / 0.37$$

$$= 702.7$$

$$\begin{aligned} \text{(ii) } T &= 0.10Y \\ &= 0.10 \times 702.7 \\ &= 70.27 \end{aligned}$$

Government expenditure = 100

Tax revenue = 70.27

Government has a deficit budget, not a balanced budget because government expenditure exceeds the tax revenue. ($G > T$)

Question 9. Suppose marginal propensity to consume is 0.75 and there is a 20% proportional income tax. Find the change in equilibrium income for the following

(i) Government purchases increase by 20

(ii) Transfers decrease by 20.

Answer

(i)

$$\begin{aligned} \Delta Y &= \frac{1}{1-c(1-t)} \times \Delta G \\ &= \frac{1}{1-0.75(1-0.2)} \times 20 \\ &= \frac{1}{1-0.75 \times 0.8} \times 20 \\ &= \frac{20}{1-0.60} \\ &= \frac{20}{0.4} \\ &= 50 \end{aligned}$$

(ii)

$$\begin{aligned} \Delta Y &= \frac{c}{1-c} \Delta T \\ &= \frac{0.75}{1-0.75} \times 20 \\ &= \frac{0.75}{0.25} \times 20 = 60 \end{aligned}$$