Macroeconomic Impact of Fiscal Adjustments and Keynes

Keynesian Macroeconomics

- Keynesian macroeconomics is essentially based on the working multipliers.

- The multipliers show that how changes in sector affect the overall economy.

- Fiscal policy changes affect directly two important variables – government expenditure and taxes.

- Government expenditure has positive effects on income and employment by the value of government expenditure multiplier.

- On the other hand, taxes have negative impact on income and employment by the value of tax multiplier.

Macroeconomic System and Keynesian Views

$$Y = C + I + G$$

$$C = a + bY_D$$

$$Y_D = Y - T$$

$$Y = a + bY - bT + I + G$$

$$Y - bY = a - bT + I + G$$

$$Y = \frac{1}{1-b}(a - bT + I + G)$$

$$\overline{Y} = \frac{1}{1-b}(a - bT + I + G)$$

$$\overline{Y} = \begin{pmatrix}\text{autonomous expenditure}\\ \text{multiplier}\end{pmatrix} \times \begin{pmatrix}\text{autonomous}\\ \text{expenditures}\end{pmatrix}$$

Fiscal variables and multipliers

Government Expenditure

$$\Delta Y = \frac{1}{1-b} \Delta G$$

$$\frac{\Delta Y}{\Delta G} = \frac{1}{1-b}$$

Taxes

$$\Delta Y = \frac{1}{1-b} (-b) \Delta T$$

$$\frac{\Delta Y}{\Delta T} = \frac{-b}{1-b}$$

Government expenditure, taxes and multipliers

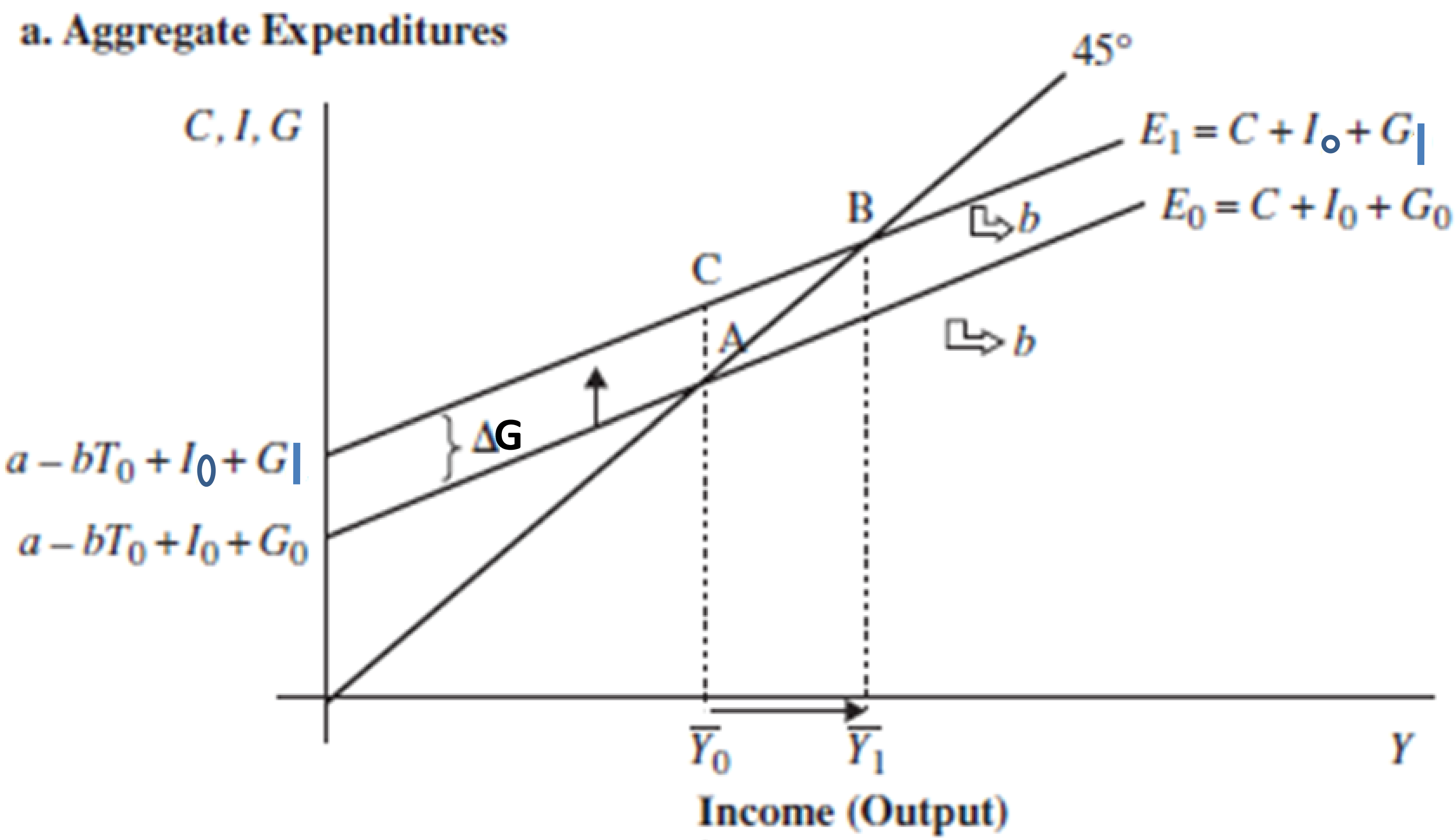
$$b = 0.5: \quad \frac{1}{1-b} = \frac{1}{1-0.5} = 2; \quad \frac{-b}{1-b} = \frac{-0.5}{1-0.5} = -1$$

$$b = 0.8: \quad \frac{1}{1-b} = \frac{1}{1-0.8} = 5; \quad \frac{-b}{1-b} = \frac{-0.8}{1-0.8} = -4$$

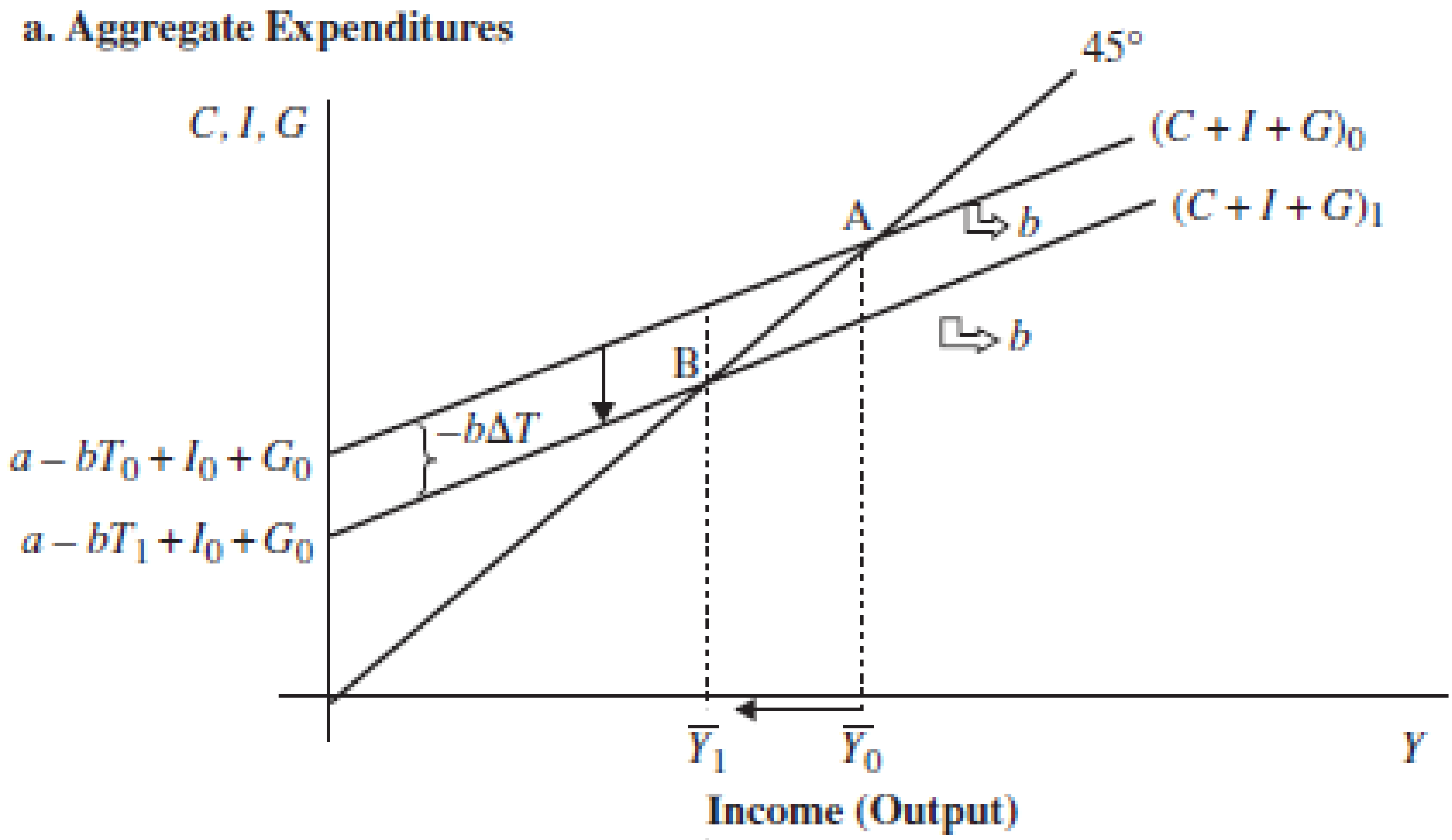
$$b = 0.9: \quad \frac{1}{1-b} = \frac{1}{1-0.9} = 10; \quad \frac{-b}{1-b} = \frac{-0.9}{1-0.9} = -9$$

Effect of Government Expenditure

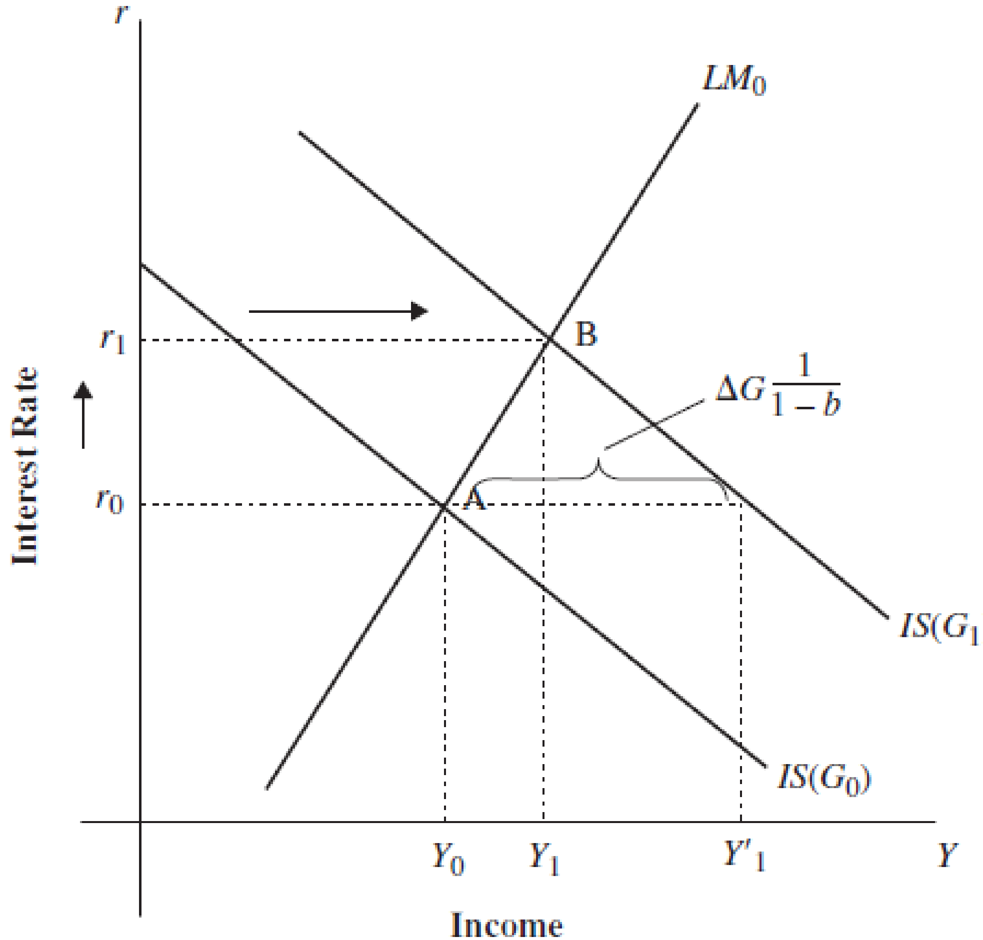
(Source of graph: Froyen (2013))



Effect of Tax
(Source of graph: Froyen (2013))

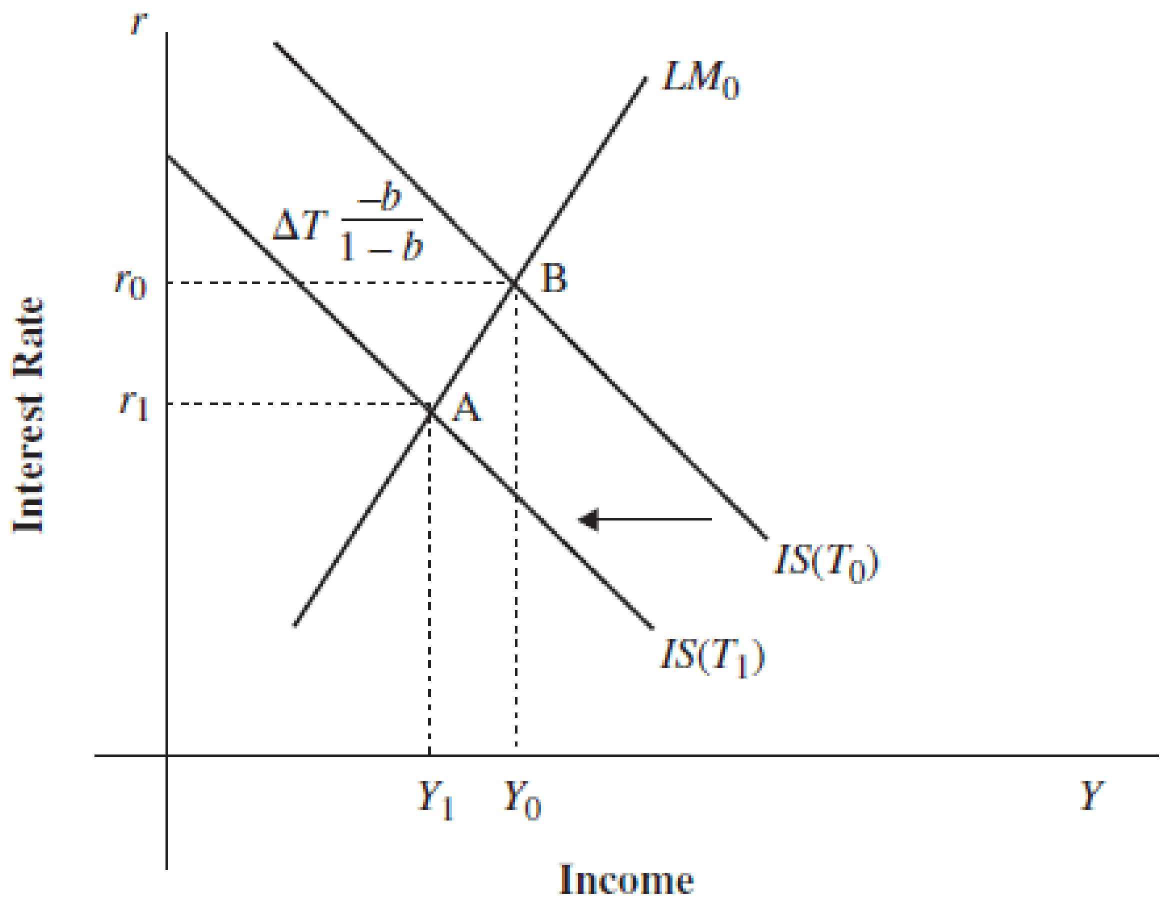


Fiscal Adjustments: IS-LM Curve Approach
Government Spending
(Source of graph: Froyen (2013))



An increase in government spending shifts the *IS* schedule to the right from $IS(G_0)$ to $IS(G_1)$. Income rises from Y_0 to Y_1; the interest rate rises from r_0 to r_1.

Effect of Tax
(Source of graph: Froyen (2013))



An increase in taxes shifts the *IS* schedule to the left from $IS(T_0)$ to $IS(T_1)$. Income falls from Y_0 to Y_1, and the interest rate falls from r_0 to r_1.

To Sum up

- Under Keynesian Macroeconomics –
- Fiscal adjustments are more effective than monetary changes.
- Any policy change leading to rise in government expenditure will increase equilibrium level of income and output.
- Tax increase would put downward pressure on equilibrium level of income through decline in consumption demand.
- The final impact on aggregate demand depends upon the value of relative values of expenditure and tax multiplier.
- Under IS-LM framework, the extent of impact depends upon the slope of IS and LM curve both.

For any additional query

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