5. Fiscal Policy at Work

EE 212

Case & Fair, ch. 9; LCR, ch. 26

March 2013

- Tax
  - Regressive Tax : As tax base rises, tax rate $\downarrow$, ATR $\downarrow$ MTR$\downarrow$, MTR < ATR
  - Proportional Tax : tax base rises, tax rate remains constant. ATR and MTR remain constant , MTR = ATR
  - Progressive Tax : As tax base rises, tax rate $\uparrow$, ATR $\uparrow$ MTR$\uparrow$, MTR > ATR

1. Direct taxes : tax collected from income received by the owner of factors of production. Normally, income tax is progressive (as income $\uparrow$, tax rates $\uparrow$).
2. Indirect taxes : tax which is not collected from income received by the owner of factors of production, for example VAT

  - It sems to be proportional tax. People with high income pays the same rate as people with low income when they buy goods and services.
  - It cound be considered as regressive tax.

- **Effect of Tax on Equilibrium National Income**
  1. S + T + M = I + G + X : Tax $\uparrow \Rightarrow$ leakage $\uparrow \Rightarrow Y_E \downarrow$:
  2. Y = DAE = $C + I + G + X - M$. Tax $\uparrow \Rightarrow Y_d \downarrow$
     $\Rightarrow$ C $\downarrow \Rightarrow$ DAE $\downarrow$ and $Y_E \downarrow$

G = T : Balance Budget, creation of public debt = 0
G < T : Budget Surplus, creation of public debt < 0
G > T : Budget Deficit, creation of public debt > 0

- $T = T_0 + tY$=Lump Sum Tax + Income Tax
  - an increase in Lump Sum Tax $\Rightarrow$ DAE shift down
  - a decrease in Lump sum Tax $\Rightarrow$ DAE shift up
  - an increase in income tax rate (t) $\Rightarrow$ DAE rotates clockwise or becomes flatter
  - a decrease in income tax rate (t) $\Rightarrow$ DAE rotates counter-clockwise or becomes steeper
- $G = G_0 = G_a$
  - an increase in intended government expenditure $\Rightarrow$ DAE shift up
  - a decrease in intended government expenditure $\Rightarrow$ DAE shift down
- Inflationary gap ($Y > Y_F$) : $\uparrow$ Tax, $\downarrow$ Government Expenditure
- Deflationary gap ($Y < Y_F$) : $\downarrow$ Tax, $\uparrow$ Government Expenditure

- Tools of Fiscal Policy : Nondiscretionary fiscal policy and Discretionary Fiscal policy

1. Non-discretionary fiscal policy (Automatic or Built-in Stabilizing): Income Tax
    - MPC = b , MPC out of Y = b - bt
    - Slope of DAE = MPTS = $b - bt + d - m$
    - $DAE_{\text{with income tax}}$ is flatter than $DAE_{\text{without income tax}}$ ***
    - Multiplier $= \dfrac{1}{1 - \text{slope}} = \dfrac{1}{1 - (b - bt + d - m)}$: Slope ↑, Multiplier ↑
    - $\text{Multiplier}_{\text{with income tax}}$ is less than $DAE_{\text{without income tax}}$ ***
    - **Income tax will make the multiplier effect smaller.**
    - Therefore, the same magnitude of a positive ΔAE, Y_E for the economy with income tax will increase by a smaller amount than that for the economy without income tax.
    - The economy with income tax is more stable.
    - Lump sum tax is **not** automatic stabilizer.

2. Discretionary fiscal policy (more relevant)
(1) Expansionary fiscal policy : employed when the government want to stimulate economy, when there is a deflationary gap, $\uparrow G$, $\downarrow$ T
(2) Contractionary fiscal polucy : emploed to solve inflation problem or inflationary gap, $\downarrow G$, $\uparrow$ T

- Tax multiplier is lower than Government Multiplier.
- The government has to decrease lump-sum tax more than to increase in government spending to close the deflationary gap.
- The government has to increase lump-sum tax more than to decrease in government spending to close the inflationary gap.

Limitations of Fiscal Policy

- Limitations of nondiscretionary fiscal policy : Automatic stabilizer just helps reducing the fluctuation in output. When the economy tends to have an inflationary or a deflationary gap, it help reducing the size of the gap. However, it cannot totally prevent the gap to happen.
- Limitations of discretionary fiscal policy :
  - **Fiscal Lags** :
    - To change fiscal policy requires making changes in taxes anf government expenditures. The change must be agreed on by the admistration and passsed by Congress. Thus, even if economists agrred that the economy wold be helped by, say, a tax cut, politicians would likely spend a good deal of time debating whose tax and by how much. “delay” $\Rightarrow$“decision lag”
    - Once policy changes are agreed on, there is still an execution lag. It takes time for the economic consequences to be felt.