

## Week 10 Budget Deficits and National Debt

### 1. **Balanced Budget is not the Norm**

The focus of fiscal policy is on balancing the AS(=Y) w/ AD(=C+I+G+[X-M]), but this is not necessarily the norm.

A. Blind fiscal policy action under the goal of balanced budget can actually work adversely to the detriment of the economy.

i) Attempts to balance the budget during the Great Depression would only prolong and deepen the recession. *e.g.*)  $C \downarrow \rightarrow \text{multiplier} \rightarrow \downarrow Y \rightarrow T \downarrow \rightarrow T-G < 0 \rightarrow \text{Gov't would either } \downarrow G \text{ or } \uparrow T \text{ to restore } T=G. \text{ (exactly the opposite of appropriate policy action)} \rightarrow Y \downarrow \text{ further.}$

ii) Budget balancing can also lead to inappropriate fiscal policy under boom conditions. *e.g.*)  $Y \uparrow \rightarrow T \uparrow \rightarrow \text{Gov't will either } \uparrow G \text{ or } \downarrow T \rightarrow \uparrow Y \text{ further (boom the boom).}$

B. Appropriate fiscal policy depends on the stance of monetary policy.

i) Balanced budget may be appropriate under one monetary policy, but a deficit or surplus may be under another. *e.g.*) Under  $Y_F$  contractionary monetary policy will  $\downarrow AD \rightarrow \text{recessionary gap} \rightarrow \text{must either } \uparrow G \text{ or } \downarrow T \text{ to restore } Y_F \rightarrow \text{budget deficit is appropriate.}$

ii) A given target for AD implies that any  $\Delta$  fiscal policy will  $\Delta$  appropriate monetary policy. *e.g.*) If gov't wants to  $\downarrow$  budget deficit by  $\downarrow G$  w/o  $\downarrow Y$ , monetary policy must be sufficiently more expansionary to restore  $AD_F$ .

### 2. **Deficit and Debt**

A. Definitions

i) Budget Deficit is the amount by which  $G > T$  during a specified period of time. (*e.g.*) a year).

ii) National Debt is the federal gov't's total indebtedness at a moment in time..

B. Points in Question

i) Private debts can be settled by their assets, but gov't debts don't have explicitly equivalent countervailing assets.

ii) *The cause of debt:* Until about 1983, almost all of the U.S. national debt stemmed from financing wars and from the losses of tax revenues during recessions. From the early '80s until 1993, the national debt grew faster than nominal GDP due to deficit spending and tight monetary policy of the Reagan era. (Of course, there were no  $\pi$ 's, but only recession in the early '80's. And as  $\uparrow \pi \rightarrow \downarrow \text{real debt} \rightarrow \therefore \uparrow \text{Debt}$ )

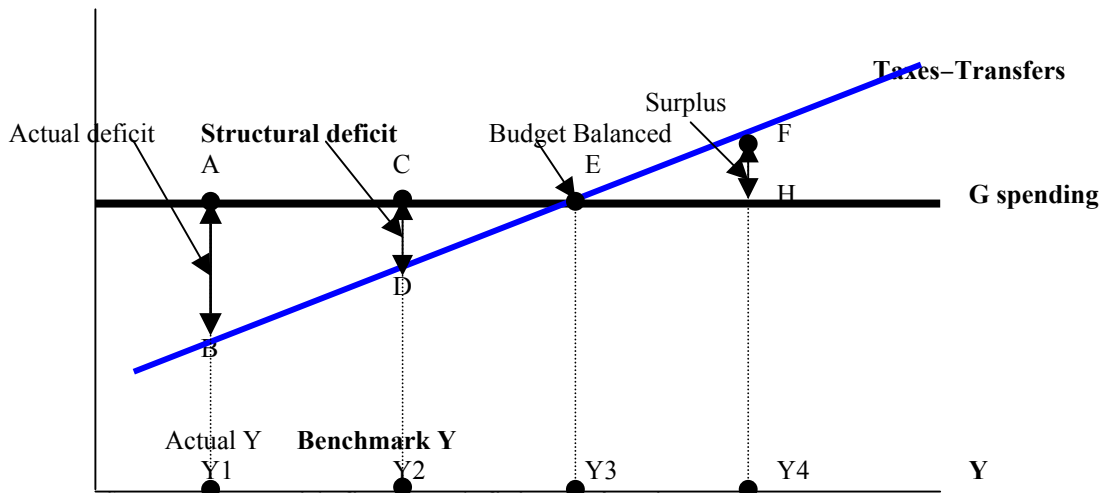
### 3. **How to Interpret the Budget Deficit**

A. *Deficit per se is not a good measure of fiscal policy.* : The same fiscal program can lead to a large or small deficit depending on the state of the economy.

*e.g.*) Since  $\text{Deficit} = G + \text{Transfers} - \text{Taxes}$ , during a recession,  $GDP \downarrow \rightarrow T\text{-revenue} \downarrow \ \& \ \text{unemployment} \uparrow \rightarrow \text{transfer payments} \uparrow \rightarrow \text{Deficit} \uparrow$ .

$\therefore$  Deficit  $\uparrow$  in recession and  $\downarrow$  in boom, even w/ no  $\Delta$  fiscal policy.  $\rightarrow$  *i.e.* The same fiscal policy can lead to  $Y_1, Y_2, Y_3, \text{ or } Y_4$ .

$T - G$  (assuming  $G$  is relatively constant)



- i) Even with fixed  $G$ , deficit can  $\uparrow$  or  $\downarrow$ .
  - ii) Since deficit/surplus can widen depending on boom/recession, we can't compare each year's deficit/surplus objectively. Therefore, we must correct for this portion of deficit/surplus induced by boom/recession by benchmarking  $Y$  to  $Y^*$  near  $Y_F$ .
- B. *Structural Deficit/Surplus*: The hypothetical deficit/surplus (benchmarked to near  $Y_F$ ) we would have under current fiscal policies (tax rates & expenditure rules) if the economy were operating near  $Y_F$ .
- C. *The Strength of Structural Deficit*:
- i) Based on spending and taxing at some fixed level of  $Y$ , it is insensitive to the state of the economy.
  - ii) It changes only when fiscal policy changes.
- D. *Changing Nature of Budget Deficits* (cf. Table 15-1, p330)
- i) The difference btwn Actual and Structural Deficit was negligible in 1989.
  - ii) Even though the official deficit was smaller in 1995 than 1983, the structural deficit was actually larger in 1995.
  - iii) The structural deficit rose steadily from 1987 to 1993.
4. **Inflation Accounting for Interest Payments & Other Measurement Issues**
- A. *Inflation Accounting*: Adjusting standard accounting procedures for the fact that inflation lowers the purchasing power of money.
- $i$  (Nominal interest) =  $r$  (Amount of purchasing power the borrower turns over to the lender for the privilege of borrowing) +  $\pi$  (inflation premium).
- i) The inflation premium,  $\pi$ , is the compensation of eroded purchasing power of the principal.
  - ii) The portion of interest payments that merely compensates for inflation should be counted as early repayment of principal, not as interest.
  - iii) Only the real interest,  $r$ , should be treated as a  $G$ -expenditure item in the budget. (cf. Table 15-2, p331)

- iv) To correct for inflation, must subtract inflation premium ( $\pi$ ) from the interest ( $i$ ) paid on the national debt, thereby counting only real interest payments ( $r$ ). (cf. Table 15-3, p332)

## B. Other Measurement Issues

- i) *State and local budget surpluses*: The federal govt gives a good deal of money to the state and local govts in the form of grants-in-aid each year. Thus, the combined deficit of all levels of govt < federal deficit.
- ii) *Capital expenditures*: Some federal spending goes to purchase K of various sorts – govt buildings, military equipment, ... etc on borrowed money (deficit).

## C. What happened after 1981

- i) In 1981 the economy was weak and inflation was high. The apparently substantial budget deficit of 1981 was actually a surplus on a structural, inflation-corrected basis.
- ii) Since 1983 even the structural budget has been in substantial deficit in the first half of the 1980's largely due to the tax-cut.
- iii) The problem worsened after 1989 as G grew faster than tax receipts. → ∴ The recent heightened concern w/ deficit is appropriate.

## 5. Bogus Arguments about the Burden of Debt

### Q1. Tax Burden on Future Generation for Interest Payment

#### A1. Intertemporal Transfer of Wealth w/in the Economy

- i) As long as the national debt is owned by domestic citizens, the future interest payments only transfer money from one group of Americans to another.
- ii) These transfers hardly constitute a burden on the nation as a whole. This argument is valid only if a large portion of the debt is held by foreigners.
- iii) The only valid point is that the taxes that will have to be raised to pay interest on U.S. citizens may reduce the efficiency of the economy. (cf. Living on Borrowed Time-Supplementary Reading 8)

### Q2. Fallacy of Comparing Gov't Debt to Private Debt (Repaying Enormous Debt will Ruin the Nation.)

#### A2. Ponzi Finance Scheme

- i) Unlike private debt, the nation need never pay off its debt.
- ii) Each time the principal is due, the U.S. Treasury can simply *roll it over* by floating more debt.

### Q3. Fallacy of Limited Capacity to Borrow

#### A3. U.S. Gov't need never fear defaulting on its debt.

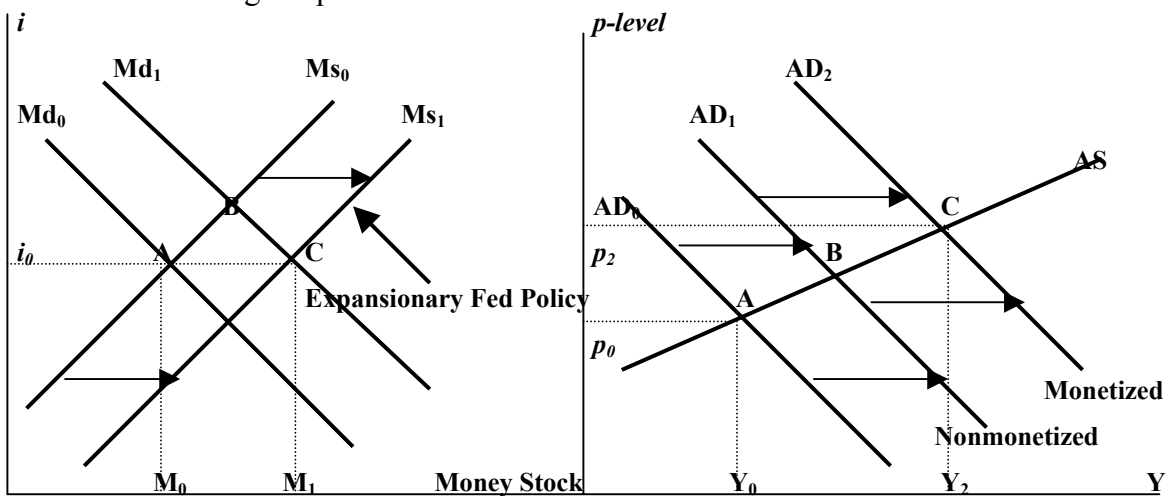
- i) It can raise revenue by taxation.
- ii) The American national debt is an obligation to pay in U.S. dollars. → If worse comes to worst, U.S. gov't can print them.
- iii) The downside is that this will cause inflation and will depreciate the exchange rate of dollar.

∴ Budget deficits can be either good or bad under the appropriate circumstances.

## 6. Budget Deficits and Inflation

### A. Vietnam war & inflation in the 1960's

- i) U.S. economy was @  $Y_F$  in 1965. → Deficit spending was certainly inflationary, b/c it ↑ AD. → In the LR, deficit spending will have raised the price level. (c.f. Fig. 15-5 p336)
- ii) *Sensitivity of budget deficit on inflationary effect* depends on the slope of AS curve → The steeper, the more inflationary.
- iii) *Degree of resource utilization*: The more fully employed the economy, the more inflationary the deficit spending becomes than in an economy w/ lots of slacks.
- iv) *Federal Reserve's monetary policy* can always cancel out the potential inflationary effects of deficit spending by pulling the AD curve back to its original position.



### B. Monetization Issue

- i) Deficit spending normally ↑ Y & P-level → ↑ Md → a) If Fed takes no action,  $i \uparrow$  / b) If Fed defends  $i$ , it will have to ↑ Ms (*expansionary monetary policy*) → Fed purchases gov't bonds → Fed takes on more gov't debt.  
∴ Monetized deficits are more inflationary than the nonmonetized debt.
- ii) Normally, Fed does not monetize substantial portion of the deficit. (c.f. During most of 1970's and early 1980's, Fed's policy was to stabilize Ms, but since 1983, it changed to stabilize  $r$ .)
- iii) The LR dangers of monetization when deficits are large and chronic have been major source of inflation in Latin America, and were recently the cause of hyperinflation in Russia.

## 6. Deficits, Interest Rates, and Crowding Out & Crowding In

### A. Crowding Out:

- i) When  $G > T$ , gov't borrows the balance through issuing more bonds. → Gov't bonds compete w/ corporate bonds and other financial instruments

(stocks) for available funds.  $\rightarrow$  Deficit spending forces  $I \downarrow$ .  $\rightarrow \downarrow K$ -stock  $\rightarrow \downarrow Y$ .

$\therefore$  Large national debt will be a burden on future generations in this sense.

- ii) However, under normal circumstances, this  $\$1 \uparrow G$  does not crowd out exactly  $\$1 I$ , b/c a) moderate budget deficits  $\uparrow i$  only slightly; b) sensitivity of  $I$  to  $i$  is modest.

B. *Crowding in*

- i) Deficit spending in times of **economic slack** quickens the pace of economic activity  $\rightarrow \uparrow Y \rightarrow \uparrow I$   
 $\therefore \uparrow G \rightarrow \uparrow I$ .
- ii) The strength of crowding in depends on how much additional  $Y$  is stimulated by  $G$  and how sensitive  $I$  is to  $\uparrow$  profit opportunities.
- iii) Crowding-in can dominate crowding-out in the SR. a) If  $S$  is fixed, supply-side dominates b/c self-correcting mechanism forces actual  $Y$  close to potential  $Y$ , and  $G \uparrow$ , crowding-out holds.  $\rightarrow$  dominant in the LR. b) If the economy has slacks, and  $G \uparrow \rightarrow Y \uparrow \rightarrow S \uparrow$ , crowding-in holds.  $\rightarrow$  dominant in the SR.

7. **True Burden of National Debt Revisited**

A. *Depends on whether the economy is @  $Y_F$  level or in slack.*

- i) Budget deficit in a near  $Y_F$  economy  $\rightarrow$  crowding out  $\rightarrow \downarrow K$ -stock  $\rightarrow \downarrow Y$   $\rightarrow$  burden on future generations.
- ii) Budget deficit in a slack economy  $\rightarrow$  crowding in  $\rightarrow \uparrow K$ -stock  $\rightarrow \uparrow Y$   $\rightarrow$  blessing to the future generation.

B. *Case in Point w/ U.S.*

- i) Financing of WWII was contracted in a  $Y_F$  economy  $\rightarrow$  constituted a burden.  $\rightarrow$  but the burden is not felt that much by the post WWII generations, b/c it was a better alternative than others (taxation or printing money which could have put constraints on  $C$  or unleashed huge inflation).
- ii) A series of recessions (slack in the economy) prior to 1983 was a blessing rather than a burden.
- iii) Post 1983, structural deficit ballooned to  $\$200$  billion/year in 1990.  $\rightarrow$  real threat of crowding out posed serious potential burden on future generations.

8. **Deficit Reduction & Growth**

A. *SR Danger of Deficit Reduction:* In the SR,  $\downarrow$  deficit  $\rightarrow$  contractionary fiscal policy  $\rightarrow \downarrow AD$  if w/o expansionary monetary policy  $\rightarrow \downarrow Y$  &  $P$ -level  $\rightarrow$  recession.

B. *LR Benefit of Deficit Reduction:* In the LR, smaller budget deficit  $\rightarrow \downarrow i$  (b/c of less crowding out)  $\rightarrow \uparrow I \rightarrow \uparrow K$ -stock  $\rightarrow \uparrow Y$ .