

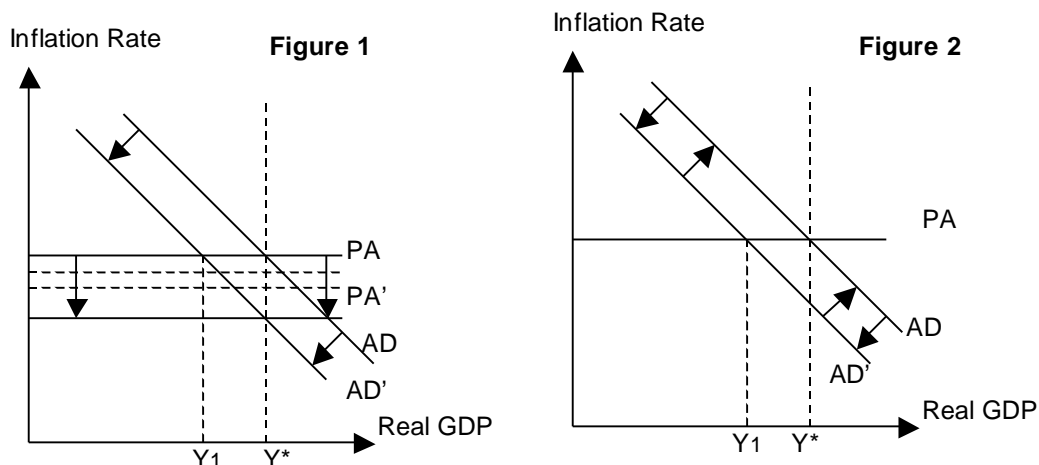
## Lecture 16: Fiscal Policy

### I. OVERVIEW

- In the last few lectures we looked at the impact of fiscal and monetary policy on an economy that is in steady state using the AD/PA model. We also looked at how other events like oil price shocks can affect the economy in the short run and the long run.
- In today's lecture, we will look in more detail at how we can use fiscal policy to help an economy that is doing badly to get out of a recession. We will also take a look at how different types of government purchases (more spending on technology vs. more spending on bureaucrats) have different impacts on the economy
- Finally, we will closely examine the reasons behind why fiscal policy is easier to model in theory than carry out in practice. We will also look at all government spending, not just government purchases; many of the interesting issues involving fiscal policy involve discussion of the entire government budget .

### II. EXPANSIONARY FISCAL POLICY IN AN ECONOMY THAT IS IN RECESSION

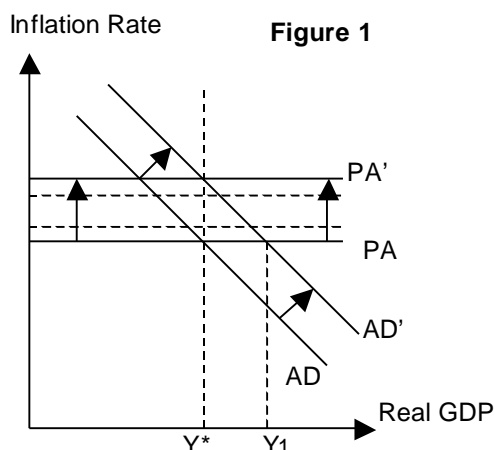
- "Fiscal policy" is a term that is used to refer to government decisions regarding taxation and spending. Expansionary fiscal policy refers to a tax cut or an increase in spending.
- First, let's concentrate on how we can use expansionary fiscal policy to get an economy out of a recession. First let's think about what caused the recession in the first place: let's suppose a fall in consumer confidence because consumers become uncertain about the future of the stock market.
- The fall in consumer confidence reduces spending and shifts the AD curve in. Output falls to  $Y_1$ . Over time, even if the government does nothing, inflation will start to fall as firms start to decrease prices. This is shown by the PA line shifting downwards.
- As inflation falls, the Fed will lower interest rates and as a result, we will see an increase in output. Since the change in  $Y$  is brought about by a change in inflation, this will be captured as a movement along the AD curve.
- Eventually the economy will return to potential output with a lower inflation rate but the price we pay for the low inflation is a short run recession. This is shown in Figure 1 below.

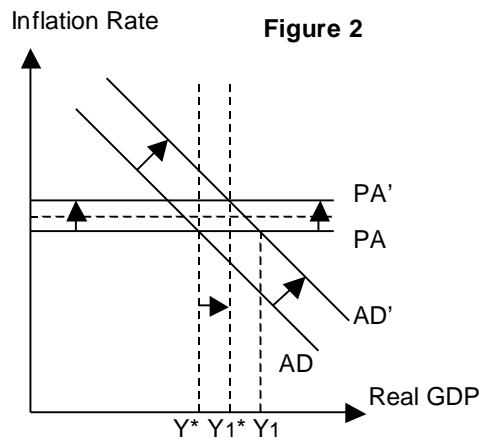


- On the other hand, even though the recession is temporary, the government may not be too happy waiting for the economy to recover. There is good reason to believe that the horizon of the government is fairly short and that they dislike recessions.
- The government can avoid a recession by pursuing expansionary fiscal policy: cuts in taxes or increases in government purchases that shift the AD curve back so that the economy does not even suffer a short-term recession. This is illustrated in Figure 2 above.

### III. SHOULD WE PURSUE EXPANSIONARY FISCAL POLICY IF THE ECONOMY IS AT $Y^*$ ?

- In the last lecture, we discussed how a cut in taxes or an increase in  $G$  will lead to a short-term boom but in fact lead to higher inflation in the long run. This is reproduced in Figure 1 below.
- So we face a tradeoff: essentially long term inflation for short-term increases in output. If you had the long-term health of the economy in mind, then we should not try to pursue expansionary fiscal policy unless the economy is in a slump because it will lead to more inflation.
- This conclusion depends on the assumption that  $Y^*$  was unaffected: that the fiscal policy left the economy's long run ability to produce goods and services unaffected. We know that this is not always the case. If the increased spending was on (for example)
  - a. Improving research used to come up with new technologies.
  - b. Programs designed to improve the education level of workers.
  - c. Job training programs that better matched workers with jobs
 Then the economies long run ability to produce increases because technology and/or labor increases.
- Conversely, if the increased spending was on wasteful programs that cause interest rates to increase then the resulting fall in investment can in fact REDUCE the economy's long run ability to produce by pushing out investment.
- So in short, the impact of increased  $G$  on  $Y^*$  can be ambiguous. We will generally assume that it has NO effect unless I expressly say otherwise (this is because I as Supreme Dictator have the last word!).
- However, let's think about the case where the government spends money on research programs that will increase the economy's ability to produce goods and services in the long run. The results are given below in Figure 2.
- The increased spending will shift the AD curve out and also shift  $Y^*$  out to  $Y_1^*$  (in general by less than the increase in  $Y$ ). Overtime prices will rise as  $Y > Y^*$  but the overall inflationary impact is smaller than in the case where  $Y^*$  is unaffected. Furthermore, output will end up higher than the original level so the expansionary fiscal policy is good for the economy.





#### IV. COMPOSITION OF THE FEDERAL BUDGET

- We would also like to discuss some other issues involving the taxation and spending decisions of the government. In particular we need to think about budget deficits and why they matter and distinctions between deficits and the debt.
- Before we talk about the consequences of deficits and the impact of government spending, it is important to realize what the government spends its money on.
- In 1998 the budgetary allocations for government expenditure were as follows:
 

Social Security and Medicare	34%
National Defense	16%
Social Programs	18%
Interest on Debt	11%
Discretionary Spending	18% [Education, Housing, Transportation, Research]
- The breakdown of government revenue was as follows:
 

Personal Taxes:	48%
Social Security and Medicare Taxes:	34%
Corporate Taxes	10%
Excise, Customs, Gift Taxes	7%
- We can see that a large part of government spending is on entitlement programs and social programs and not on the purchase of goods and services, which is what we count as part of GDP.

#### V. DEBT AND DEFICITS

- The excess of government expenditure over government revenue in a given year is known as the budget deficit. If expenditures are less than revenues then we have a budget surplus.
- After many years in which the government ran persistent budget deficits, the last two years have seen the appearance of a budget surplus. The budget surplus in 1998 was \$69 billion, while in 1999 it is predicted to exceed 100 billion dollars.
- When the government runs a budget deficit it needs some way to pay for the extra expenditure, the deficit needs to be “financed”. Deficits are usually financed by selling government bonds.
- These bonds are essentially promises by the government to pay the bondholder a fixed amount of money every period in exchange for lending the government money. So if you buy a \$1000 30-year bond that pays \$50 every year, you are essentially lending the money to the government for a 30 year period.

- In exchange they are agreeing to pay you a 5% interest rate every year for the use of your money
- In some countries deficits are financed by printing money, but this is relatively rare in the United States.
- We also need to distinguish between the deficit and the debt. The debt is the total amount of outstanding loans owed by the government while the deficit is the amount of new loans that are added every year to the debt.
- We can better understand the distinction by appealing to the bathtub analogy we used in discussing the difference between investment and capital. The debt is the level of water in the tub, expenditures is the water running into the tub and revenues become the water leaving the tub.
- So if expenditures exceed revenues: the water entering the tub exceeds the water leaving the tub, the deficit is positive and the debt increases. If revenues exceed expenditures we have a surplus (a negative deficit) so the debt becomes smaller.
- Accumulated debt in the U.S is about 50% of GDP, which is actually small in % terms compared to a lot of countries.

## VI. OUTLOOK FOR THE FUTURE

- Even though we are currently running a surplus we should not be too optimistic about the future: in the long run the real problem is entitlement programs like Social Security and Medicare.
- Even though Social Security receipts currently exceed expenditures in the next 30 years this will change as the demographics of the U.S. population changes. For example, the number of 65+ year old will increase from 13% to 20% while the working age population will fall from 60% to 56%.
- Current predictions of Medicare, Medicaid and Social Security growth show that these programs will grow from 8% of GDP to 16% in the next 30 years and if unaddressed, debt could be 130% of GDP by the year 2030.
- Attempts to address the issue of spiraling growth in entitlements
  - a) Means testing : Restrict benefits to low income elderly
  - b) Control medical costs: How? The billion dollar question
  - c) Increase retirement age: Currently popular, citing the improvements in health and longevity.
  - d) Correct for inflation a la the Boskin commission

## VII. WHY DO WE CARE ABOUT DEFICITS/DEBT?

1. An increase in the share of government purchases can raise  $r$  in the long run, crowd out investment and have adverse consequences for the economy.
2. In an open economy, an increase in the government deficit may increase the amount of money we owe to foreigners. Even this is not a real economic concern it was a major popular concern during the 80's.
3. If the debt/GDP ratio becomes too large, the risk of default by the government will become high. This will raise the interest rate that the government has to pay lenders. Lead to increases in the debt in the future.
4. Unfair to future generations. Transferring the burden to your children and grandchildren and leaving them with the responsibility of paying off the debt.