Lecture 12:

AE Model to AD-AS Model and Fiscal Policy

Reference: Appendix to Chapter 8 and Chapter 9

LEARNING OBJECTIVES

1.   Derivation of AD curve from the AE Model.

2. What fiscal policy is and what it is used for.

3. About the economy's built-in stabilizers.

4.   The problems, criticisms, and complications of fiscal policy.

I. Introduction

A. One major function of the government is to stabilize the economy (prevent unemployment or inflation).

B. Stabilization can be achieved in part by manipulating the public budget—government spending and tax collections—to increase output and employment or to reduce inflation.

II. Fiscal Policy and the AD/AS Model

A. Discretionary fiscal policy refers to the deliberate manipulation of taxes and government spending by Parliament to alter real domestic output and employment, control inflation, and stimulate economic growth.

"Discretionary" means the changes are at the option of the Federal government.

B. Simplifying assumptions:

   1. Assume initial government purchases don't depress or stimulate private spending.

   2. Assume fiscal policy affects only demand, not supply, side of the economy.

C. Fiscal policy choices: <u>Expansionary fiscal policy</u> is used to combat a recession (see examples illustrated in Figure 9-1).

   1. Expansionary Policy needed: In Figure 9-1, a decline in investment has decreased AD from AD_1 to AD_2 so real GDP has fallen and also

employment declined. Possible fiscal policy solutions follow:

a. An <u>increase</u> in <u>government spending</u> (shifts AD to right by more than change in G),

b. A decrease in <u>taxes</u> (AD shifts to right by a multiple of the change in consumption).

c. A combination of increased spending and reduced taxes.

d. If the budget was initially balanced, expansionary fiscal policy creates a budget deficit.

2. <u>Contractionary fiscal policy</u> needed: When demand-pull inflation occurs as illustrated by a shift from AD_2 to AD_3.

D. Policy options: G or T?

   1. Economists tend to favour higher G during recessions and higher taxes during inflationary times if they are concerned about <u>unmet social needs or infrastructure</u>.

   2. Others tend to favour lower T for recessions and lower G during inflationary periods when they think <u>government is too large</u> and inefficient.

III. Built-In Stability

A. Built-in stability arises because net taxes (taxes minus transfers and subsidies) change with GDP (recall that taxes reduce incomes and therefore, spending). It is desirable for spending to rise when the economy is slumping and vice versa when the economy is becoming inflationary.

Figure 9-3 illustrates how the built-in stability system behaves.

1. Taxes automatically rise with GDP because incomes rise and tax revenues fall when GDP falls.

2. Transfers and subsidies rise when GDP falls; when these government payments (welfare, unemployment, etc.) rise, net tax revenues fall along with GDP.

B. The size of automatic stability depends on <u>responsiveness</u> of changes in taxes to changes in GDP: The more <u>progressive</u> the tax system, the greater the economy's built-in stability. In Figure 9-3 line T is steepest with a progressive tax system.

1.   a) Progressive Tax

     Example: Canadian Tax system

     b) Proportional Tax

     c) Regressive Tax

2. Automatic stability reduces instability, but does not correct economic instability.

IV. Evaluating Fiscal Policy

A. A cyclically adjusted budget (full-employment budget) in Year 1 is illustrated in Figure 9-4(a) because budget revenues equal expenditures when full-employment exists at GDP_1.

B. At GDP_2 there is unemployment and assume no discretionary government action, so lines G and T remain as shown.

1. Because of built-in stability, the actual budget deficit will rise with decline of GDP; therefore, actual budget varies with GDP.

2. The government is not engaging in expansionary policy since budget is balanced at F.E. output.

3. The cyclically adjusted budget measures what the federal budget deficit or surplus would be with existing taxes and government spending if the economy is at full employment.

4. Actual budget deficit or surplus may differ greatly from full-employment budget deficit or surplus estimates.

C. In Figure 9-4b, the government reduced tax rates from T_1 to T_2, now there is a F.E. deficit.

    1. Cyclically adjusted deficits occur when there is a deficit in the full-employment budget as well as the actual budget.

    2. This is an expansionary policy because true expansionary policy occurs when the full-employment budget has a deficit.

D. If the F.E. deficit of zero was followed by a F.E. budget surplus, fiscal policy is contractionary.

E. Table 9-1 and Global Perspectives 9-1 give a fiscal policy snapshot.

V. Problems, Criticisms and Complications

A. Problems of timing

1. <u>Recognition lag</u> is the elapsed time between the beginning of recession or inflation and awareness of this occurrence.

2. <u>Administrative lag</u> is the difficulty in changing policy once the problem has been recognized.

3. <u>Operational lag</u> is the time elapsed between change in policy and its impact on the economy.

B. <u>Political considerations</u>:
Government has other goals besides economic stability, and these may conflict with stabilization policy.

1. A <u>political business cycles</u> may destabilize the economy: Election years have been characterized by more expansionary policies regardless of economic conditions.

   a. political business cycles?

2. Expectations of Reversals

3. Provincial and local finance policies may offset federal stabilization policies. They are often <u>pro-cyclical</u>, because balanced-budget requirements cause states and local governments to raise taxes in a recession or cut spending making the recession possibly worse. In an inflationary period, they may increase spending or cut taxes as their budgets head for surplus.

4. The <u>crowding-out effect</u> may be caused by fiscal policy.

    a. "Crowding-out" may occur with government deficit spending. It may increase the interest rate and reduce private spending which weakens or cancels the stimulus of fiscal policy. (See Figure 9-5)

    b. Some economists argue that little crowding out will occur during a recession.

    c. Economists agree that government deficits should not occur at F.E., it is also argued that monetary authorities could counteract the crowding-out by increasing the money supply to accommodate the expansionary fiscal policy.

d. With an upward sloping AS curve, some portion of the potential impact of an expansionary fiscal policy on real output may be dissipated in the form of inflation.

VI. Fiscal Policy in an Open Economy (See Table 9-2)

A. Shocks or changes from abroad will cause changes in net exports which can shift aggregate demand leftward or rightward.

B. The net export effect reduces effectiveness of fiscal policy: For example, expansionary fiscal policy may affect interest rates, which can cause the dollar to appreciate and exports to decline (or rise).

VII. LAST WORD: The Leading Indicators

A. This index comprises 10 variables that have indicated forthcoming changes in real GDP in the past.

B. The variables are the foundation of this index consisting of a weighted average of ten economic measurements. A rise in the index predicts a rise in the GDP; a fall predicts declining GDP.

   1. Retail trade furniture and appliance sales

   2. Other Durable goods

   3. Housing Index

   4. New orders for durable goods

5. Shipment-to-inventory ratio of finished products

6. Average workweek (hours)

7. Business and personal service employment

8. United States composite leading index

9. S&P/TSX Composite Index

10. Money Supply

C. None of these factors alone is sufficient to predict changes in GDP, but the composite index has correctly predicted business fluctuations many times (although not perfectly). The index is a useful signal, but not totally reliable.