

## CHAPTER 8 STUDY GUIDE

### FISCAL POLICIES, DEFICITS, AND DEBT

Over the years, the most serious macroeconomic problems have been those resulting from the swings of the business cycle. Learning what determines the equilibrium level of real output and prices in an economy and what causes them to fluctuate makes it possible to find ways to achieve maximum output, full employment, and stable prices. In short, macroeconomic principles can suggest policies to control both recession and inflation in an economy.

As you will discover in Chapter 31, the federal government may use **fiscal policy**, changes in government spending, or taxation to influence the economy's output, employment, and price level. The chapter first discusses discretionary fiscal policy to show how it affects aggregate demand. **Expansionary fiscal policy** is used to stimulate the economy and pull it out of a slump or recession by increasing government spending, decreasing taxes, or some combination of the two. **Contractionary fiscal policy** is enacted to counter inflationary pressure in the economy by cutting government spending, raising taxes, or a combination of the two.

Discretionary fiscal policy requires that Congress take action to change tax rates, modify transfer payment programs, or purchase goods and services. **Nondiscretionary fiscal policy** does not require Congress to take any action and is a **built-in stabilizer** for the economy. The economy has a progressive tax system that provides such automatic or built-in stability. When GDP increases, net tax revenues will increase to reduce inflationary pressure and when GDP declines, net tax revenues will fall to stimulate the economy.

To evaluate the direction of fiscal policy requires understanding of the **cyclically adjusted budget** and the distinction between a **cyclical deficit** and a cyclically adjusted deficit. This budget analysis enables economists to determine whether federal fiscal policy is expansionary, contractionary, or neutral, and to determine what policy should be enacted to improve the economy's economic performance. From this budget analysis you will gain insights into the course of U.S. fiscal policy in recent years.

Fiscal policy is not without its problems, criticisms, or complications. There are timing problems in getting it implemented. There are political considerations in getting it accepted by politicians and voters. If the fiscal policy is temporary rather than permanent it is thought to be less effective. Some economists criticize the borrowing of money by the federal government for expansionary fiscal policy because they think it will raise interest rates and crowd out investment spending, thus reducing the policy effects. The debate over the value of fiscal policy is an ongoing one as you will learn from the chapter.

Any budget surplus or deficit from a change in fiscal policy affects the size of the **public debt** (often called the national debt). Over the years the United States accumulated a public debt that now totals more than \$17 trillion. This debt increased because budget deficits accumulate over time and are not offset by budget surpluses. The size of the public debt is placed into perspective by (1) describing who owns the debt; (2) comparing it (and interest payments on the debt) to the

size of the economy (GDP); and (3) looking at the sizes of the public debt in other industrial nations.

The last sections of the chapter examine the economic implications or **consequences of the public debt**. These economic problems do not include bankrupting the federal government because the government can meet its obligations by refinancing and taxation. Nor does the public debt simply shift the economic burden to future generations because the public debt is a public credit for the many people who hold that debt in the form of U.S. securities. Rather, the public debt and payment of interest on the debt contribute to important problems: increased inequality in income, reduced incentives for work and production, decreased standard of living when part of the debt is paid to foreigners, and the possible crowding out of private investment.

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## ■ CHECKLIST

When you have studied this chapter you should be able to

- Distinguish between discretionary and nondiscretionary fiscal policy.
- Explain expansionary fiscal policy on aggregate demand when the price level is inflexible downward.
- Compare and contrast an expansionary fiscal policy through increased government spending or decreased taxation.
- Describe contractionary fiscal policy on aggregate demand when the price level is inflexible downward.
- Compare and contrast a contractionary fiscal policy through decreased government spending or increased taxation.
- Assess whether it is preferable to use government spending or taxes to counter recession and reduce inflation.
- Explain the relationship between net tax revenues and GDP.
- Describe automatic or built-in stabilizers and their economic importance.
- Indicate how the built-in stabilizers help to counter recession and inflation.
- Describe how automatic stabilizers are affected by different tax systems (progressive, proportional, and regressive).
- Distinguish between the actual budget and the cyclically adjusted budget for evaluating discretionary fiscal policy.
- Describe recent U.S. fiscal policy using the cyclically adjusted budget.
- Describe projections for U.S. budget deficits and surpluses.
- Use the cyclically adjusted budget to evaluate discretionary fiscal policy.
- Outline three timing problems that may arise with fiscal policy.
- Discuss the political considerations affecting fiscal policy.
- Explain how expectations of policy reversals in the future change the effectiveness of fiscal policy.
- Describe how changes in state and local finances may offset fiscal policy at the federal level.
- Explain the crowding-out effect of fiscal policy.

- Discuss current thinking on fiscal policy.
  - Explain the relationship of budget deficits and surpluses to the public debt.
  - List the major types of owners of the public debt.
  - Compare the size of the public debt to GDP.
  - Compare the U.S. public debt with the debt of other advanced industrial nations.
  - Compare interest payments on the public debt to GDP.
  - State two reasons why a large public debt will not bankrupt the federal government.
  - Discuss whether the public debt imposes a burden on future generations.
  - State the effect of the public debt on income distribution.
  - Explain how the public debt affects incentives.
  - Evaluate the differences between foreign and domestic ownership of the public debt.
  - Describe the crowding-out effect from a public debt.
  - State two factors that offset the crowding-out effect of a public debt.
  - Describe the shortfall affecting Social Security and Medicare and the policy options (*Last Word*).
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## ■ CHAPTER OUTLINE

1. **Fiscal policy** consists of the changes made by the federal government in its budget expenditures and tax revenues to expand or contract the economy. In making these changes, the federal government may seek to increase the economy's real output and employment, or control its rate of inflation.
  
2. Fiscal policy is *discretionary* when changes in government spending or taxation are designed to change the level of real GDP, employment, incomes, or the price level. The **Council of Economic Advisers (CEA)** advises the U.S. president on such policies. Specific action then needs to be taken by Congress to initiate this discretionary policy, in contrast to *nondiscretionary* fiscal policy that occurs automatically (see item 3).
  - a. **Expansionary fiscal policy** is generally used to counteract the negative economic effects of a recession or cyclical downturn in the economy (a decline in real GDP and rising unemployment). The purpose of the policy is to stimulate the economy by increasing aggregate demand. The policy will create a **budget deficit** (government spending greater than tax revenues) if the budget was in balance before the policy was enacted. Assume the price level is fixed. There are three options for increasing aggregate demand
    1. The government can increase its discretionary spending. The initial increase from this spending will be increased by the multiplier effect. Since the price level is fixed, real output will rise by the full extent of the multiplier effect.
    2. Another option would be for the government to reduce taxes. Some of the tax cut would be saved, but some of it would be spent. The spent portion

would provide an initial stimulus to the economy that would be magnified by the full extent of the multiplier effect since the price level is fixed.

3. The government may decide to use some combination of increased government spending and tax reductions to increase aggregate demand.
  - b. **Contractionary fiscal policy** is a restrictive form of fiscal policy generally used to correct an inflation gap. Assume that the economy is at a full-employment level of output. If aggregate demand increases (shifts rightward), it will increase output and at the same time pull up output prices, creating demand-pull inflation. If government does nothing, input prices will rise in the long run to match the increase in output prices, creating more inflation. The purpose of contractionary fiscal policy is to reduce aggregate demand pressures that increase the price level. If the government budget is balanced before the policy is enacted, it will create a **budget surplus** (tax revenues are greater than government spending). The contractionary effect on the economy from the initial reduction in spending from the policy will be reinforced by the multiplier effect. Three policy options are used, but account should be taken of the ratchet effect (the price level is inflexible downward).
    1. The government can decrease spending. If the price level is fixed because of the ratchet effect, the multiplier will have a full effect in decreasing output, but there will be no change in the price level. Government policy will have to take into account this ratchet effect to calibrate the decline in aggregate demand so it does not cause a recession.
    2. The government can increase taxes. The amount of the tax increase will need to be greater than a decrease in government spending because some of the tax increase will reduce saving, and not just consumption.
    3. The government can use some combination of decreased government spending and increased taxes to reduce aggregate demand.
  - c. Whether government purchases or taxes should be altered to reduce recession and control inflation depends on whether an expansion or a contraction of the public sector is desired.
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3. In the U.S. economy there are automatic or **built-in stabilizers** that serve as nondiscretionary or passive fiscal policy. Such stabilizers work through net tax revenues (tax revenues minus government transfer payments and subsidies). These net tax revenues automatically or passively increase as the GDP rises and automatically or passively decrease as the GDP falls.
    - a. The economic importance of this net tax system is that it serves as a built-in stabilizer of the economy. On the one hand, it reduces purchasing power during periods of prosperity to counteract increases in aggregate demand that can contribute to demand-pull inflation. On the other hand, it expands purchasing power (after-tax income) during periods of declining output and high employment.
    - b. The degree of built-in stability in the economy depends on the responsiveness of net tax revenues to changes in GDP. As GDP increases, the average tax rates will

increase in a **progressive tax system**, remain constant in a **proportional tax system**, and decrease in a **regressive tax system**. Thus, there is more built-in stability or net tax responsiveness for the economy in progressive tax systems. Built-in stabilizers, however, can only reduce and cannot eliminate economic fluctuations, so discretionary fiscal policy or monetary policy may be needed to moderate large fluctuations in the business cycle.

4. To evaluate the direction of discretionary fiscal policy, adjustments need to be made to the actual budget deficits or surpluses.
  - a. The **cyclically adjusted budget** is a better index than the actual budget of the direction of government fiscal policy because it indicates what the federal budget deficit or surplus would be if the economy were to operate at its full-employment level of GDP (its potential output). In the case of a budget deficit, the cyclically adjusted budget removes the **cyclical deficit** that is produced by a decline in real GDP because of a downturn in the business cycle, and reveals the size of the **cyclically adjusted deficit**, indicating how expansionary the fiscal policy was that year if the economy had achieved its potential level of GDP.
5. Recent data on *cyclically adjusted budget deficits or surpluses* show the years that fiscal policy was expansionary or contractionary.
  - a. From 2000 to 2004 surpluses decreased and deficits increased, so fiscal policy was expansionary. From 2004 to 2007 deficits declined, so fiscal policy was contractionary.
  - b. Fiscal policy during the Great Recession was expansionary. In 2008 the U.S. Congress passed an economic stimulus package and provided some tax breaks. A substantially larger economic stimulus package was passed in 2009. These actions changed the cyclically adjusted deficits from  $-1.3$  percent of GDP in 2007 to  $-2.9$  percent in 2008 and to  $-7.1$  percent in 2009. Fiscal policy clearly became significantly more expansionary during this period. Since 2009, the size of the cyclically adjusted deficits fell in 2010 ( $-5.7$ ), in 2011 ( $-0.6$ ), and again in 2012 ( $-4.3$ ), indicating that fiscal policy become contractionary.
  - c. Figure 31.5 in the text shows past changes in U.S. budget deficits and surpluses. It also shows projections, but these can change with changes in fiscal policy and economic growth.
6. Certain **problems, criticisms, and complications** arise in implementing fiscal policy.
  - a. There will be problems of *timing*. First, it takes time to recognize the need for fiscal policy because it takes time for data to be collected that provide strong evidence of downturns or upturns in the business cycles. Second, it takes time for the U.S. president and U.S. Congress to take the appropriate administrative and

legislative actions to respond to a recognized problem. Third, there is the need for time for the policy to become operational and take the desired effect on output or inflation.

- b. There may be *political considerations* with fiscal policy that counter the economic effects. Elected officials may cause a ***political business cycle*** if they lower taxes and increase spending before an election to stimulate the economy and then do the opposite after an election.
  - c. Fiscal policy may be less effective if people expect it to be reversed in the future, thus making the policy temporary rather than permanent.
  - d. The fiscal policies of state and local governments can run counter to federal fiscal policy and offset it (for example, state and local fiscal policy can be contractionary while federal fiscal policy is expansionary).
  - e. An expansionary fiscal policy may, by raising the level of interest rates in the economy, reduce investment spending and weaken the effect of the policy on real GDP. The extent of this ***crowding-out effect*** depends on the condition of the economy. The crowding-out effect is likely to be relatively small when the economy is in a recession and experiences slack investment demand. It is likely to be more serious when the economy is near full-employment because the public demand for money to finance government competes with the private demand for money to fund economic investments.
  - f. Current thinking about discretionary fiscal policy shows differing perspectives. Some economists think that fiscal policy is ineffective because of all the potential problems and complications. They recommend the use of monetary policy to guide the economy. Other economists think that fiscal policy can be useful for directing the economy and that it can reinforce or support monetary policy. There is general agreement, however, that fiscal policy should be designed so that its incentives and investments strengthen long-term productivity and economic growth.
7. The ***public debt*** at any time is the sum of the federal government's previous annual deficits, minus any annual surpluses. In 2012 the total public debt was \$16.4 trillion.
- a. The public debt is owned by various holders of ***U.S. government securities*** (financial instruments issued by the U.S. government to borrow money such as U.S. Treasury bills, notes, and bonds). Forty percent of the public debt is held by federal government agencies (29%) and the Federal Reserve (11%). Sixty percent is owned by a "public" that includes U.S. individuals (6%), U.S. banks and financial institutions (10%), foreigners (33%), and others such as state and local governments (11%).
  - b. It is better to consider the size of the debt as a percentage of the economy's GDP than the absolute amount because the percentage shows the capacity of the economy to handle the debt. In 2012, the percentage of the public debt held by the public (70%) was much higher than in previous years of the decade.
  - c. Many industrial nations have public debts as a percentage of GDP that are greater than that of the United States.

- d. Interest payments as a percentage of the economy's GDP reflect the level of taxation (average tax rate) required to pay interest on the public debt. The percentage in 2012 (2.3%) is unchanged since 2000 because the Federal Reserve kept interest rates very low.
8. The **false contentions** about a large debt are that it will eventually bankrupt the government and that borrowing to finance expenditures passes the cost on to future generations.
- a. The debt *cannot bankrupt* the government because the government can refinance it by selling new bonds and using the proceeds to pay existing bondholders. It also has the constitutional authority to levy taxes to pay the debt.
  - b. Most of the burden of the debt *cannot be shifted to future generations* because U.S. citizens and institutions hold most of the debt. Repayment of any portion of the principal and the payment of interest on it does not reduce the wealth or purchasing power in the United States because it would be paid to U.S. citizens and institutions. The only exception is the payment of the part of debt that would go to foreign owners of the debt.
9. The public debt does create **real and potential problems** in the economy.
- a. The payment of interest on the debt probably increases *income inequality* because this payment typically goes to wealthier individuals.
  - b. The payment of taxes to finance these interest payments may *reduce incentives* to bear risks, to innovate, to invest, and to save, and therefore slow economic growth in the economy.
  - c. The portion of the debt held by foreign citizens and institutions (the **external public debt**) requires the repayment of principal and the payment of interest to foreign citizens and institutions. This repayment would *transfer to foreigners* a part of the real output of the U.S. economy.
  - d. An increase in government spending may impose a burden on future generations by *crowding out* private investment spending, and thus reducing the future stock of capital goods.
    - 1. If government spending is financed by increased public debt, the increased borrowing of the federal government will raise interest rates and reduce private investment spending. Future generations will inherit a smaller stock of capital goods.
    - 2. The burden imposed on future generations is lessened if the increase in government expenditures is for worthwhile **public investments** that increase the productive capacity of the economy. This public investment also can complement and stimulate private investment spending that increases the future capital stock.

10. *Last Word* (Social Security and Medicare Shortfalls). *Social Security* is a U.S. retirement program that taxes payroll income and uses the money to pay for mandated benefits to retirees and others. *Medicare* is a U.S. health care program for people 65 years of age and older that also taxes payroll income to pay for the health care benefits. The problem for both Social Security and Medicare is that the funds paid into the trust fund for each program are likely to be depleted in the coming years or decades. Each program, therefore, faces a number of unpleasant options such as reducing program benefits or increasing taxes to provide sufficient funding to keep each program solvent.
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## ■ HINTS AND TIPS

1. Fiscal policy is a broad concept that covers several kinds of policies. The main difference is between discretionary and nondiscretionary fiscal policies. Discretionary fiscal policy is active and means that Congress has taken specific actions to change taxes or government spending to influence the economy. It can be expansionary or contractionary. Nondiscretionary fiscal policy is passive, or automatic, because changes in net tax revenues will occur without specific actions by Congress.
2. An increase in government spending that is equal to a cut in taxes will not have an equal effect on real GDP. To understand this point, assume that the MPC is .75, the increase in government spending is \$8 billion, and the decrease in taxes is \$8 billion. The multiplier would be 4 because it equals  $1/(1 - 0.75)$ . The increase in government spending will increase real GDP by \$32 billion ( $\$8 \text{ billion} \times 4$ ). Of the \$8 billion decrease in taxes, however, one-quarter of it will be saved ( $\$8 \text{ billion} \times .25 = \$2 \text{ billion}$ ) and just three-quarters will be spent ( $\$8 \text{ billion} \times .75 = \$6 \text{ billion}$ ). Thus, the tax cut results in an increase in *initial* spending in the economy of \$6 billion, not \$8 billion as was the case with the increase in government spending. The tax cut effect on real GDP is \$24 billion ( $\$6 \text{ billion} \times 4$ ), not \$32 billion.
3. Make sure you know the difference between a **budget deficit** (government spending greater than tax revenue for a year) and the **public debt** (the accumulation over time of budget deficits that are offset by any budget surpluses). These two terms are often confused.

4. The best way to gauge the size of budget deficits, the public debt, or interest on the public debt is to calculate each one as a *percentage of real GDP*. The absolute size of these three items is *not* a good indicator of whether it causes problems for the economy.
  5. Try to understand the real rather than the imagined problems caused by the public debt. The debt will not cause the country to go bankrupt, nor will it be a burden on future generations.
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## ■ IMPORTANT TERMS

**fiscal policy**

**Council of Economic Advisers (CEA)**

**expansionary fiscal policy**

**budget deficit**

**contractionary fiscal policy**

**budget surplus**

**built-in stabilizer**

**progressive tax system**

**proportional tax system**

**regressive tax system**

**cyclically adjusted budget**

**cyclical deficit**

**political business cycle**

**crowding-out effect**

**public debt**

**U.S. government securities**

**external public debt**

**public investments**