

Lesson 9 - Fiscal Policy

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Section 1: Fiscal Policy

Definition of Fiscal Policy

Fiscal policy or **discretionary fiscal policy** refers to the deliberate manipulation of taxes and government spending by Congress to alter real output and employment (thus impacting economic growth) and to control inflation. The word “discretionary” means that the policy changes are at the discretion or option of the Federal government. When fiscal policy is used to try to increase output and reduce unemployment, it is called **expansionary**; when fiscal policy is used to try to lower inflation, it is referred to as **contractionary**.

In the U.S., fiscal policy has been integral to the overall management of the economy since the 1930's, when its adoption was based on the work of John Maynard Keynes as published in his book, *The General Theory of Employment, Interest, and Money*. As the recent economic recession reached its low point, the Financial Times reported in October, 2008, the following about the General Theory:

The heart of the book is the idea that economic downturns are not necessarily self-correcting. Classical economics held that business cycles were unavoidable and that peaks and troughs would pass. Keynes contended that in certain circumstances economies could get stuck. If individuals and businesses try to save more, they will cut the incomes of other individuals and businesses, which will in turn cut their spending. The result can be a downward spiral that will not turn up again without outside intervention.

That is where government comes in: to pump money back into the economy by some means, such as spending on public works, to persuade individuals and businesses to save less and spend more themselves.

Note that according to Keynes, without any self-correcting mechanisms within the economy itself, there can be no guarantee of stability and growth, particularly in the short-run. Further, Keynes also pointed out the **Paradox of Thrift**. As indicated above, this notion states that if everyone saves more money during times of recession, then consumption expenditures will go down. Consequently, businesses will cut back on production, and reduce economic activity, leading to even lower levels of income across the economy. Keynes argued that if everyone saves, then there is a decrease in consumption, which leads to a fall in aggregate demand and thus a decline in economic growth. As a result, Keynes believed that government must take an active role in encouraging aggregate demand by changing the levels of government spending or the levels of taxes.

There are various types of fiscal policies and, at the Federal level, all of them require Congressional action and Presidential concurrence in order to become law because we are talking about changes to government spending programs and/or modifications to tax policies. However, changes to spending and taxing programs at the state and local levels are also classified as fiscal policy. Since we're primarily concerned with the national economy, our focus here will be at the Federal level. In the rest of this section and the next section we will focus on different types of fiscal policy.

Expansionary Fiscal Policy

Fiscal Policy can be used to combat a recession. Expansionary fiscal policy is most often used during periods of high cyclical unemployment, when policy makers feel that stimulating economic growth and increasing real output can be done with either no impact on price levels in the economy or with minimal inflation at an acceptable level. Which

fiscal policies would be recommended during a recession? There are two policies that would be expansionary (think of shifting the Aggregate Demand curve to the right): the first would be a decrease in taxes and the second would be an increase in government spending. Let's look at the impact of each.

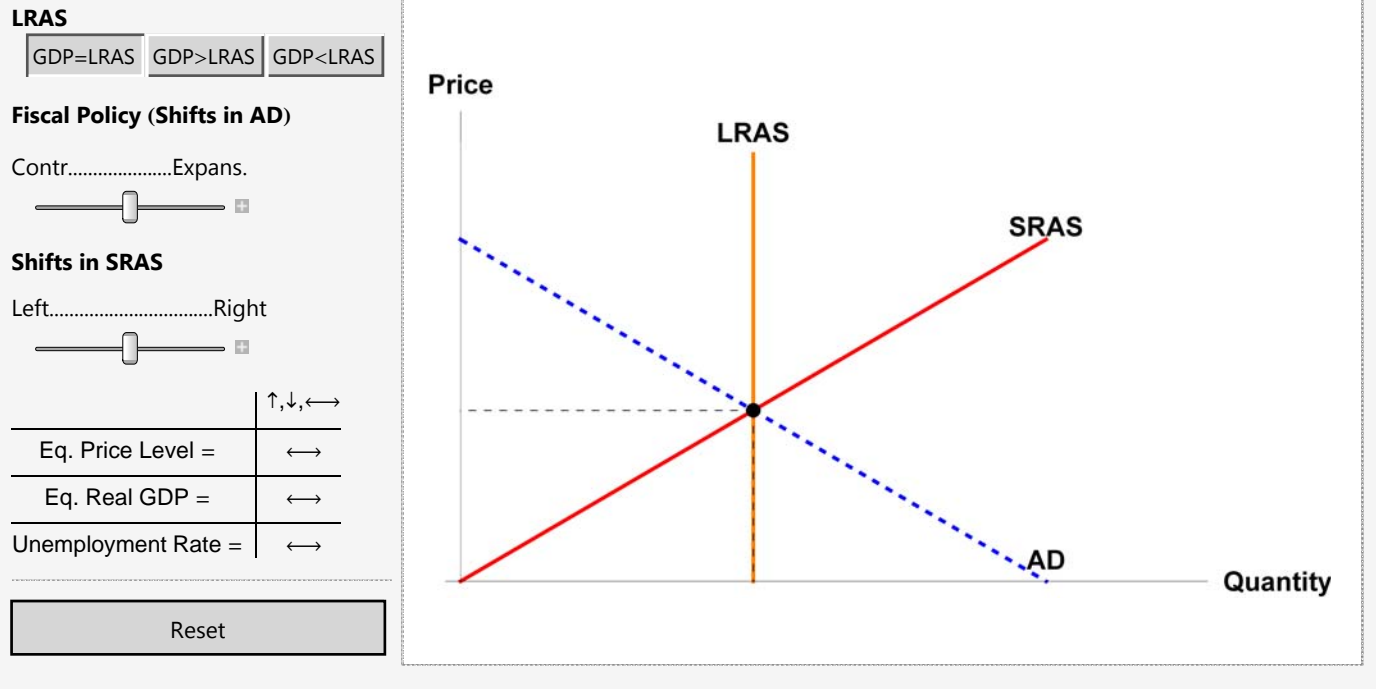
A decrease in taxes raises consumption by the MPC times the decrease in taxes and then will shift the AD to the right by a multiple of the change in consumption. It will be helpful to walk through this process. Let's say that the government decides to reduce taxes by one million dollars. When consumers are informed that their taxes are going down by one million dollars, they will find that they now have one million dollars that they thought they were going to have to pay in taxes that they are actually going to be allowed to keep. In many ways, this will seem to them like a one million dollar increase in income. How much of the one million dollars will they actually spend? This depends on the MPC. For example, if the MPC is equal to 0.8, consumers will spend \$800,000 when their taxes are reduced by one million dollars. What will they do with the other \$200,000? They will save it, because if their MPC is equal to 0.8, their MPS is equal to 0.2.

The increase in consumption of \$800,000 is going to shift the AD to the right, but by how much? With an MPC of 0.8, the expenditures multiplier is equal to 5 and the AD curve will be shifted by \$4,000,000. In this case, the AD curve will shift to the right leading to higher real GDP, a higher price level, and lower unemployment.

The one-period model below illustrates the impact of expansionary fiscal policy on the economy. Click on the "GDP<LRAS" button to show an economy that is below its potential GDP. If you shift the first slider for fiscal policy to the right, the AD curve shifts right. Notice, that if all else is held constant then real GDP increases, price level increase and the unemployment rate decreases. This expansionary fiscal policy can be used to "stimulate" economic growth. This policy is enacted by Congress and the President by decreasing taxes and/or increasing government spending. A two-period (dynamic) model of expansionary fiscal policy is presented at the end of this section.

One-Period Model (Static) – AD/AS

The graph below illustrates a one-time period model where macroeconomic equilibrium is at potential GDP ($GDP=LRAS$), where macroeconomic equilibrium is above potential GDP ($GDP>LRAS$), and where macroeconomic equilibrium is less than potential GDP ($GDP<LRAS$). One of the purposes of macroeconomics policy is to get macroeconomic equilibrium to potential GDP ($LRAS$). Fiscal policy works through the aggregate demand curve (AD). Expansionary fiscal policy includes decreasing taxes and/or increasing government spending, which shifts the aggregate demand curve to the right. Contractionary fiscal policy includes increasing taxes and/or decreasing government spending, which shifts the aggregate demand curve to the left. If the economy is overheated ($GDP>LRAS$) then contractionary fiscal policy is usually undertaken to cool down the economy. If the economy is struggling ($GDP<LRAS$) then expansionary fiscal policy is usually undertaken to try and heat up the economy. Watch what happens to equilibrium price level and real GDP when expansionary and contractionary policies are implemented. The arrows in the table indicate if the equilibrium price level and real GDP has increased (\uparrow), decreased (\downarrow), or stayed at the same value (\leftrightarrow).



Contractionary Fiscal Policy

Fiscal policy can be used to combat excessive demand-pull inflation as well. Contractionary fiscal policy is most often used during periods of high inflation when policy makers believe contracting the economy (and thereby reducing inflation) is possible with either no impact on or minimal reductions in real output, causing small increases in unemployment that would be considered acceptable. Which fiscal policies would be recommended during a period of high inflation? There are two policies that would be contractionary (think of shifting the Aggregate Demand curve to the left): the first would be a decrease in government spending and the second would be an increase in taxes.

The one-period model above illustrates the impact of contractionary fiscal policy on the economy. Click on the “ $GDP>LRAS$ ” button to show an economy that is above its potential GDP and struggling with demand-pull inflation. If you shift the first slider for fiscal policy to the left, the AD curve shifts left. Notice, that if all else is held constant then real GDP decreases, price level decrease and the unemployment rate increases. This contractionary fiscal policy can be used to slow the economic growth of the economy down. This policy is enacted by Congress and the President by increasing taxes and/or decreasing government spending. A two-period (dynamic) model of contractionary fiscal policy is presented at the end of this section.

Countercyclical Fiscal Policy

Countercyclical fiscal policy is a government policy designed to offsets shocks that would create a business cycle. For example, the terrorist attacks on 9/11 spawned a number of government spending programs in order to offset the

financial anxiety gripping the country at the time. You might also remember the “Cash for Clunkers” program that President Obama initiated in 2009, where the Federal government rebated about \$2.9 billion to U.S. residents in order to incentivize them to trade in their used cars and purchase newer, more fuel efficient cars. All such programs are designed to counteract current economic conditions, and push the economy toward full-employment RGDP.

Automatic Fiscal Stabilizers

There is another type of fiscal policy that does not require Congressional or Presidential approval for implementation. These are known as **automatic fiscal stabilizers**. They have been established by Federal legislation prior to any particular economic event and do not require Congress to take new action—hence the terms “built-in” or “automatic” stabilizers. Examples of automatic stabilizers include the unemployment and welfare compensation for people who lose their jobs during an economic recession. The laws surrounding these programs have long since been passed, and money is automatically made available to such individuals when they simply initiate an unemployment or welfare claim. Note this process is countercyclical. When people lose their jobs, incomes are reduced and spending levels begin to decline. The issuance of the unemployment checks, welfare payments, and/or food stamps at least partially offsets both the income and spending reductions, helping to “stabilize” the economy. Further, when the claimant gets a new job, such payments automatically cease as the individual gets back to his/her pre-laid-off situation.

Another automatic stabilizer is the current federal tax system. For example, when income is high, spending in the economy increases, driving up real output levels and raising prices. However, as incomes go up, more families find themselves in higher tax brackets, paying higher levels of taxes. This reduces the disposable incomes of families and limits the amount of spending and upward price pressure. The tax system works in the opposite manner when the economy enters a recession. As more and more people find themselves without jobs and incomes, they will fall into lower tax brackets, which helps stabilize their disposable incomes, and partially offsets the other reductions in the economy.

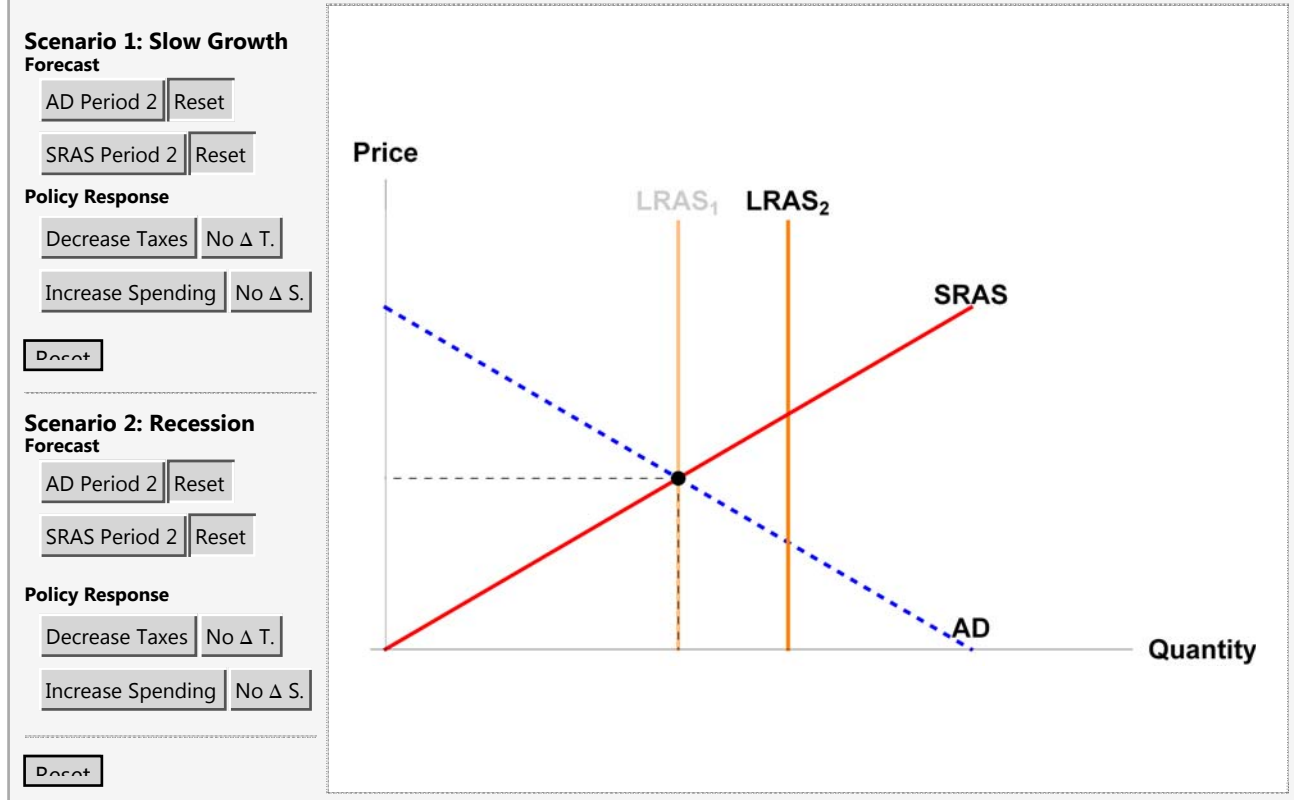
Two-period Expansionary and Contractionary Fiscal Policy (Optional)

The affects of expansionary and contractionary fiscal policy are discussed in a one-period setting. Below are graphs that represent fiscal policy in a two-period (dynamic) model.

The first graph represents expansionary fiscal policy. There are two circumstances that Congress and the President would undertake expansionary fiscal policy: slow economic growth and recession.

Two-Period Model (Dynamic) – Expansionary Fiscal Policy

The graph below illustrates a two-period model. We use it to help us understand how expansionary fiscal policy will impact unemployment, GDP, and inflation. We are currently in period 1. Each scenario forecasts what the economy will be like in period 2. In scenarios 1 (slow economic growth) and 2 (recession), Congress can enact expansionary fiscal policy (decreasing taxes and/or increasing government spending) to combat the problem. After clicking on 'AD Period 2' and 'SRAS Period 2' under scenarios 1 and 2, select 'Increasing Taxes' or 'Decrease Spending' to see how the forecast for period 2 changes. The purpose of expansionary fiscal policy is to increase the growth rate of GDP and decrease unemployment rates. The cost of expansionary fiscal policy is higher inflation rates.



The second graph represents contractionary fiscal policy. There are two circumstances that Congress and the President would undertake contractionary fiscal policy: demand-pull inflation and cost-push inflation. Cost-pull inflation provides problems for the enacting fiscal policy. The problem with cost-pull inflation is high inflation rates. It can be accompanied by a recession (see graph below). We call this situation of high inflation and negative GDP growth **stagflation**. If contractionary fiscal policy is enacted by increases taxes and/or decreasing government spending it will, in theory, slow the rate of inflation but cause a deeper recession.

Two-Period Model (Dynamic) – Contractionary Fiscal Policy

The graph below illustrates a two-period model. We use it to help us understand how contractionary fiscal policy will impact unemployment, GDP, and inflation. We are currently in period 1. Each scenario forecasts what the economy will be like in period 2. In scenarios 1 (demand-pull inflation) and 2 (cost-push inflation), Congress can enact contractionary fiscal policy (raising taxes and/or decreasing government spending) to combat the problem. After clicking on 'AD Period 2' and 'SRAS Period 2' under scenarios 1 and 2, select 'Increasing Taxes' or 'Decrease Spending' to see how the forecast for period 2 changes. The purpose of contractionary fiscal policy is to slow the growth rate of prices (inflation). The cost of contractionary policy is lower GDP and higher unemployment. If demand-pull inflation exists then we would just expect lower economic growth than forecast. For cost-push inflation it could potentially make the economy grow even slower. This makes fixing cost-push inflation tricky.

Scenario 1: Demand-Pull Inflation

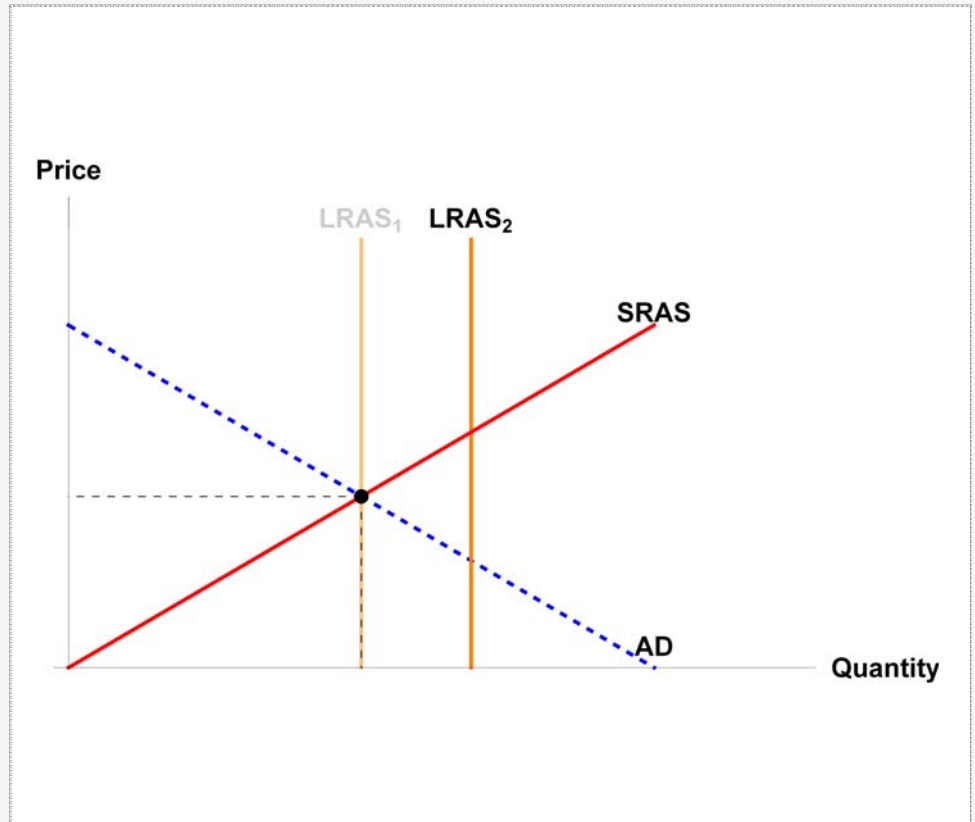
Forecast

Policy

Scenario 2: Cost-Push Inflation

Forecast

Policy



Section 2: Fiscal Policy Issues

Fiscal Policy Issues

There are a number of important issues associated with fiscal policies, and their overall effectiveness. Many of these issues revolve around positive versus normative economics, and the associated political implications. That is, policy makers tend to be rewarded for making policy, but that doesn't necessarily mean it is good policy. Sometimes fiscal policy is more expedient for short-term purposes, but not necessarily good for long-term economic strength. For example, significant amounts of government deficit spending might help reduce the unemployment level over the next 18 months, but leaves a large national debt that must be paid off by some future generation.

Issue 1: The effectiveness of fiscal policy depends, in part, on three types of lags:

a) **Recognition Lag:** The recognition lag is the time it takes between the occurrence of the economic condition and the policymakers' recognition of the situation. For example, suppose a recession begins in May, but policy

makers wait for two quarters of GDP data to confirm their suspicion of the start of the recession. In this case the recognition lag would be about seven to eight months—the time from the beginning of a recession until policy makers receive and understand sufficient data to recognize that a recession has begun. Usually this lag is between six and twelve months.

b) **Administration Lag:** The administration lag at the Federal level is the time it takes for Congress to debate and approve a fiscal policy bill, and to get the President to sign the bill. Once the economic condition is recognized, then Congress and the President have to approve discretionary fiscal policies. This lag can be from two to four months if both the Congressional majorities and the President are of the same political party, but longer if they are not of the same party.

c) **Implementation Lag:** The implementation lag, after a policy is signed into law, is the time it takes for the policy to have an impact on the economy. Under the best conditions, this lag is about six months long.

As you can see, in the best-case scenario, fiscal policy takes at least 12 to 14 months before implementation and performance measures associated with the new policy can be observed in the actual economy.

Issue 2: A second issue with fiscal policy is that it is largely dependent on the accuracy of the measures of economic performance or instruments. For example, government policy makers can only estimate the MPC, the multiplier, and other exogenous variables in determining the appropriate amount of stimulus. Moreover, policy makers can only guess as to what people will do with stimulus payments—that is people may spend the money provided, which would then begin to grow the economy, as Keynes described. However, what if people decided to save the stimulus payments instead? If saved, then the effectiveness of the policy is severely reduced, and the economy would not grow as per the expectations of the policy makers.

Issue 3: If new fiscal spending programs are implemented through government borrowings rather than tax increases, many economists believe that the government is competing away funds that would normally flow to businesses as investment undertakings. This is called "crowding out", where increases in G are offset by decreases in I , thus creating bigger government at the expense of the private market. How does this occur? The theory is that when government borrows heavily it drives up interest rates. Businesses, which are also demanding borrowed funds for their own purposes find that the cost of borrowing (i.e., the interest rate) is too high to make their own projects profitable. As a result, businesses reduce their investment spending, leading to slower economic growth.

Issue 4: Fiscal policy can often conflict with other goals. For example, suppose the economy is in a recession and a large national debt exists as well. Improving the recessionary situation may require an increase in G . However, increasing G by borrowing further raises the budget deficit and debt, and passes the financial burden onto another generation of Americans. If, however, the increase in G is funded by a tax increase, then the policy will not only increase government expenditures, but it also reduces private consumption expenditures at the same time by taking the tax money out of people's wallets. Other examples include government subsidies to farmers that tend to raise prices for consumers, or government spending for unemployment or welfare programs that dis-incentivize people to actively seek for jobs.

As a result of these kinds of situations, many economists believe that fiscal policy aimed at shifting the aggregate demand curve through taxing and spending programs actually creates greater negative incentives for people to work, save, and invest than the positive value of the fiscal programs themselves. Clearly, fiscal policy is rife with debates about positive and normative economic values.

Issue 5: Another problem that often complicates fiscal policy is determining upon whom the burden of new taxes actually falls. For example, if a new 4¢ per gallon sales tax is imposed on gasoline, the gas station owner will likely raise the price of the gasoline by 4¢. Even though the gas station owner is legally bound to collect and pay the tax, the burden or **tax incidence** is actually shifted to the consumer.

Political debates over who bears the tax incidence are often tied to the type of taxes being implemented, and as you can imagine, can be heavily weighted by positive or normative expressions. In the U.S., taxes generally take three forms as follows:

Progressive Tax—a tax is said to be progressive when the average tax rate increases as income increases. Federal income taxes, and most state income taxes are progressive. As individuals achieve higher levels of income, they also pay progressively higher income tax rates. The tax incidence always falls heavier on rich people when

progressive taxes are imposed.

Regressive Tax—a tax is said to be regressive when the average tax rate decreases as income increases. Sales taxes are the primary example of a regressive tax. Suppose a state has a sales tax of six percent. If your parents are rich, and you are poor, both you and your parents still pay an additional 6 percent on milk, eggs, gasoline, or movie tickets. The tax incidence always falls heavier on poor people when regressive taxes are imposed.

Proportional Tax—a tax is said to be proportional when the average tax rate remains fixed as income increases. In such a case, everyone pays the same percentage of income, say, 18 percent, regardless of whether he/she is rich or poor. Social Security taxes (FICA deductions from your paycheck) are an example of a proportional tax.

Issue 6: Finally, many people feel that politicians are too interested in being re-elected. **The Theory of Bureaucratic Behavior** suggests that politicians, instead of focusing on maximizing society's welfare, choose instead to minimize voter loss. Consequently, expansionary fiscal policy (i.e., lowering taxes or increasing government spending) is a popular political move, but contractionary fiscal policy (i.e., raising taxes or cutting government spending) is too politically difficult for elected leaders. As a result, fiscal policy tends to have an inflationary bias (i.e., higher income levels lead to more spending, which puts upward pressure on prices—demand pull inflation). As a result, many people believe that fiscal policy is much too subject to political machinations.

Section 3: Government Budgets

Government Budgets

The government's budget is said to be in balance when it spends exactly what it takes in through taxes and other revenue sources. A **deficit** occurs in any given year when there is a shortfall in revenue compared to government spending. A **surplus** occurs in any given year when there is an excess of revenues compared to government spending. The **national debt** is the sum of the accumulated federal surpluses minus the accumulated federal deficits. The U.S. national debt is over \$16 trillion dollars, making the U.S. the largest debtor nation in the world. You can view the latest figures on the national debt by looking at the official U.S. Treasury information at the following website: <http://www.treasurydirect.gov/NP/debt/current>.

Many economists believe that the size of the national debt is not as important as the **debt ratio** (the ratio of the national debt held by the public to GDP), as this better demonstrates the size of government in the overall economy. For the U.S. at the end of 2010, this ratio stood at 64.1 percent.

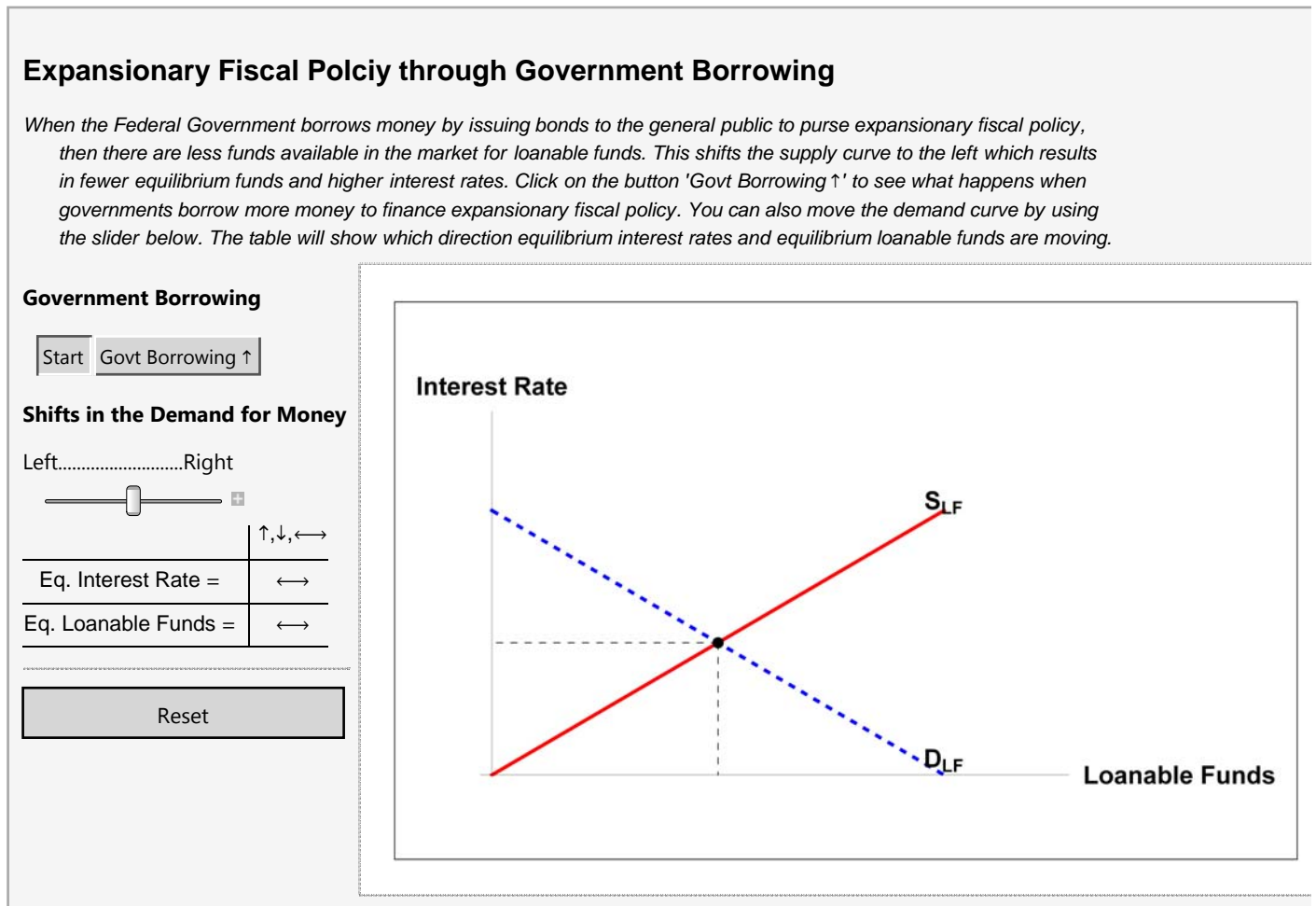
Another measure of the national debt is the amount of debt service. **Debt service** is the amount of interest paid on the outstanding debt (interest rate x total debt) as a percent of GDP, allowing us to track the cost of obtaining funds for government programs. In 2010, the debt service ratio (including debt held by the public and intra-governmental holdings) was 2.82 percent of GDP.

There are both **advantages and disadvantages to government debt**. If a government runs a deficit in order to spend on projects that increase the society's assets or welfare (i.e., educational levels), and if these new assets are valued at more than their costs, then having the deficit makes the society better off. On the other hand, if there is excessive borrowing, which leads the debt ratio to be too great, then the government will be strained in its ability to repay, and tax increases will be necessary. Moreover, if government-spending programs are wasteful and/or inefficient compared to the private sector, then society's welfare is not maximized. Again, you can sense the debate surrounding positive vs. normative ideals.

Government Budgets and Fiscal Policy

The method used to finance a deficit brought about by expansionary fiscal policy will influence the extent of the expansionary effect. Let's look at two possible ways of financing the deficit. The government can finance a deficit the same way a household would: borrowing. In this case, the government competes with private borrowing for funds. The market for loanable funds has supply and demand. If the government tries to borrow money from the public (say,

through issuing savings bonds), the money lent to the government is no longer available to supply the private market, and the supply of loanable funds shifts to the left. This drives up interest rates, which will **"crowd out"** private investment. As private investment falls, the AD shifts back to the left, thus off-setting the expansionary effects of the increase in government spending. This can be seen on the graphic below.



In the second case, the Federal Reserve essentially loans directly to the government by buying bonds which does not impact the private loanable funds market, and does not influence interest rates. Since there is no impact on private investment, the expansionary effect is greater than by borrowing because there is no **crowding out effect**. Since this method of financing the deficit is closely tied to monetary policy, not fiscal policy, we will discuss it in more detail later.

The Supply Side of Fiscal Policy

Until now, we have focused on the demand side of fiscal policy. There is an important way in which fiscal policies can influence the potential output of the economy through the supply side as well. On the government spending side, fiscal policies geared toward building infrastructure such as roads, bridges, airports, etc., can impact the future productive capacity of the economy and stimulate long-run economic growth. In short, certain types of government spending can influence the ability of the AS curve to shift to the right over time. On the tax side of fiscal policy, we can influence the long-run growth of the economy by the work incentives that our tax codes either stimulate or reduce in families and the productive incentives that our tax codes can either stimulate or reduce in firms.

Economist Arthur Laffer was an early proponent of the idea that if tax rates are too high, it can actually give individuals an incentive to work less and thereby lower tax revenues. The graph below has come to be known as the **Laffer Curve** and illustrates this point. Laffer suggested in the 1970s that we were on the downward sloping (right) side of the Laffer Curve, and that if the United States were to lower tax rates we could actually increase tax revenues. This can be illustrated by clicking on "Tax Rate 4" and then on "Tax Rate 3." Notice that as the tax rates go down tax

revenue actually increase. While there is some debate as to the validity of Laffer's argument, it is interesting to note that when President Ronald Reagan followed Laffer's guidance in this matter and lowered tax rates following his election, tax revenues increased each and every year of his presidency.

The Supply Side of Fiscal Policy

The Laffer Curve helps us understand what happens to tax revenues when tax rates are changes. For example, look at the left side of the Laffer Curve. Click on 'Tax Rate 1.' Then click on 'Tax Rate 2.' Notice that the dot moves up the curve. So on the left side of the Laffer Curve, if tax rates are raised then tax revenues increase. However, if tax rates are lowered than tax revenues decline. Click 'Reset' so the dot disappears. Now, look on the right side of the Laffer Curve. Click on 'Tax Rate 3.' Then click on 'Tax Rate 4.' Notice the movement of the dot. In this case, when tax rates are increased it lowers tax revenue. On the right side of the Laffer Curve, if tax rates are lowered it will increase tax revenue.

Left Side of Laffer Curve

Tax Rate 1 Tax Rate 2 Reset

Right Side of Laffer Curve

Tax Rate 3 Tax Rate 4 Reset



Which is Better? Government Spending or Taxes

"Liberal" economists tend to favor higher government spending during a recession (expansionary policy) and higher taxes during inflationary times (contractionary policy). Both of these policies envision a larger role for the government in the economy.

"Conservative" economists tend to favor lower taxes during a recession (expansionary policy) and lower government spending during inflationary times (contractionary policy). Both of these policies envision a smaller role for the government in the economy.

As would be the case for most groups in the country, there is no consensus among economists about which policies are preferable.

Summary

Key Terms

Administration Lag
Advantages and Disadvantages to Government Debt

Automatic Fiscal Stabilizers
Budget Deficit
Budget Surplus
Contractionary Fiscal Policy
Contractionary Fiscal Policy Definition
Crowd Out
Crowding Out Effect
Debt Ratio
Debt Service
Deficit
Discretionary Fiscal Policy
Expansionary Fiscal Policy
Expansionary Fiscal Policy Definition
Fiscal Policy
Fiscal Policy Issues
Government Budgets
Government Spending vs. Taxes
Implementation Lag
Laffer Curve
National Debt
Paradox of Thrift
Progressive Tax
Proportional Tax
Recognition Lag
Regressive Tax
Stagflation
Supply Side of Fiscal Policy
Surplus
Tax Incidence
Theory of Bureaucratic Behavior
Two-period Contractionary Fiscal Policy
Two-period Expansionary Fiscal Policy

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