

The Macroeconomic Model: Short Run to Long Run

In this activity we are working from the short run to the long run. The aggregate demand curve is downward sloping and the aggregate supply curve is upward sloping. The aggregate supply curve is upward sloping in the short run because of slow wage and price adjustments within the economy.

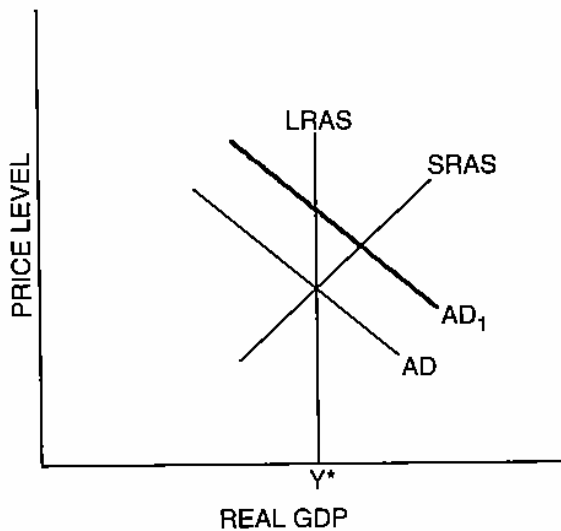
Part A

1. In the following graph, suppose the aggregate demand shifts from AD to AD₁. How will the economy react over time? Assume that no monetary or fiscal policy is undertaken.



Figure 28.1

Increase in Aggregate Demand Starting at Full Employment



(A) What will happen to output in the short run? Explain.

(B) What will happen to output as the economy moves to the long-run equilibrium? Explain.

(C) What will happen to the price level? Explain.

Activity written by Rae Jean B. Goodman, U.S. Naval Academy, Annapolis, Md. Part B was written by Robert Nuxoll, Oceanside High School, Oceanside, N.Y.

(D) What will happen to wages? Explain.

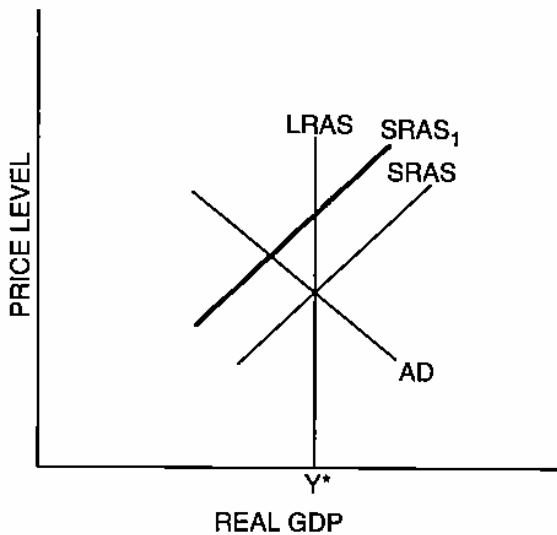
(E) In the graph, draw the shifts in AD and SRAS that you think will occur. Indicate the final aggregate demand and short-run aggregate supply curves by labeling them as AD_f and $SRAS_f$.

2. In the following graph, suppose the aggregate supply shifts from SRAS to $SRAS_1$. How will the economy react over time? Assume that no monetary or fiscal policy is undertaken.



Figure 28.2

Change in Short-Run Aggregate Supply



(A) What will happen to output in the short run? Explain.

(B) What will happen to output as the economy moves to the long-run equilibrium? Explain.

(C) What will happen to the price level? Explain.

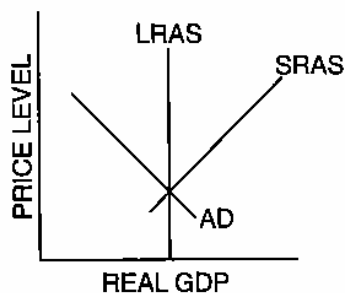
(D) What will happen to wages? Explain.

(E) In the graph, draw the shifts in AD and SRAS that you think will occur. Indicate the final aggregate demand and short-run aggregate supply curves by labeling them as AD_f and $SRAS_f$.

Part B

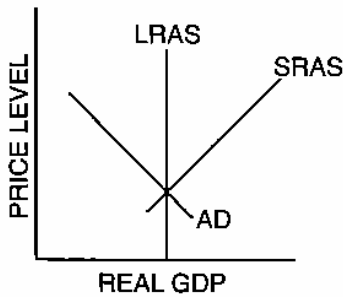
Read the description of each exogenous shock to aggregate supply and aggregate demand. Draw a new SRAS or AD curve that represents the change caused by the shock in the short run. Explain the reasons for the change in the graph, and then explain what happens in the long run if no stabilization policy is implemented. Identify the final AD curve as AD_f and the final SRAS curve as $SRAS_f$. If there is a change in LRAS, show the change and label the new curve $LRAS_f$.

- The government increases defense spending by 10 percent a year over a five-year period.



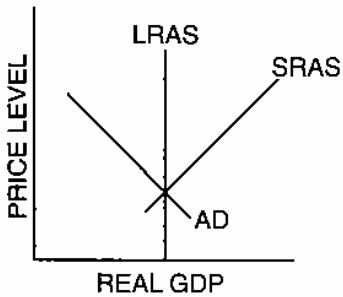
EXPLANATION:

4. OPEC cuts oil production by 30 percent, and the world price of oil rises by 40 percent.



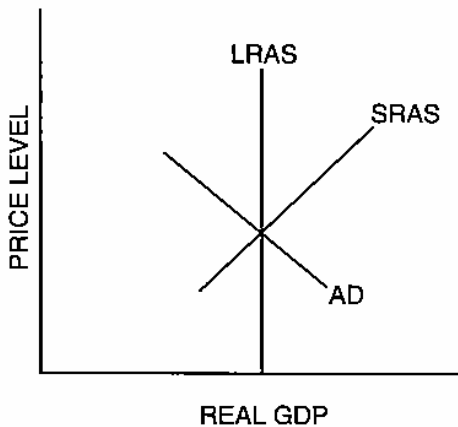
EXPLANATION:

5. The government increases spending on education, health care, housing and basic services for low-income people. No increase in taxes accompanies the program.



EXPLANATION:

6. Can the government maintain output above the natural level of output with aggregate demand policy? If the government attempts to, what will be the result?



Long-Run Aggregate Supply (LRAS) and the Production Possibilities Curve (PPC)

The long-run aggregate supply (LRAS) curve differs from the short-run aggregate supply (SRAS) curve. The LRAS curve is a vertical line at an output level that represents the quantity of goods and services a nation can produce over a sustained period using all of its productive resources as efficiently as possible with all of the current technology available to it. Long-run aggregate supply is at full employment. LRAS doesn't change as the price level changes. Developing more and better resources or improving technology will shift the LRAS curve outward, but it will still be vertical.

The LRAS curve represents a point on an economy's production possibilities curve. Remember that the production possibilities curve (PPC) represents the maximum output of two goods that can be produced given scarce resources. The economy could grow if the PPC shifts outward because of more resources or technological advances. For the same reason, the LRAS curve shifts outward if more resources are developed or if there are technological advances.

SRAS can actually be greater than LRAS. Resources can be used more intensively in the short run. For example, workers can work more hours and machines can operate for more hours. However, this output level cannot be sustained in the long run. Eventually, the equilibrium level of output will fall unless LRAS is increased. As an analogy on a personal level, you may pull an all-nighter to prepare for several exams on the same day. You cannot, however, work 24 hours a day all the time.

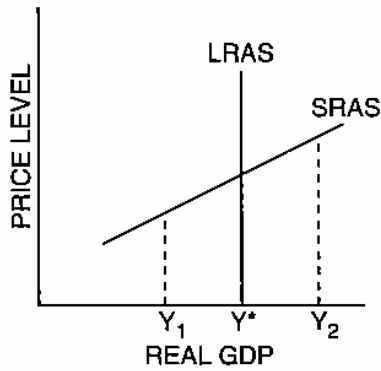
Activity written by James Stanley, Choate Rosemary Hall, Wallingford, Conn.

Now answer the questions that follow to be sure you understand these concepts. Use the graphs in Figure 29.1 in your answers.

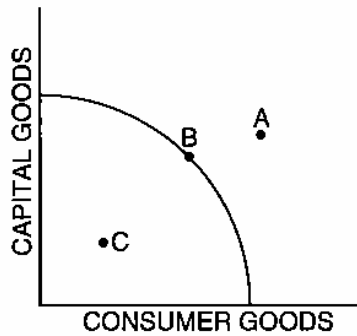


Figure 29.1
Aggregate Supply and Production Possibilities Curves

LRAS and SRAS Curves



PPC Graph



1. What information does a PPC provide for us about a nation's economy?

2. What assumptions do you make about the use of available resources when drawing a PPC?

3. What would cause a nation's PPC to shift?

4. What do you know about a nation's economy that is operating on the LRAS curve?

5. Under what conditions would an economy be on the LRAS curve?

6. If the price level rises, will LRAS shift? _____ Will the LRAS curve shift if AD changes? _____
7. If an economy finds that it faces a short-run equilibrium where real GDP is Y_1 , how would you describe the condition of the economy? Given this equilibrium level of output, at what point would the economy lie on the PPC? Explain your answer.
8. If an economy finds that it faces a short-run equilibrium where real GDP is Y , how would you describe the condition of the economy? Given this equilibrium level of output, at what point would the economy lie on the PPC? Explain your answer.
9. If an economy finds that it faces a short-run equilibrium where real GDP is Y_2 , how would you describe the condition of the economy? Given this equilibrium level of output, at what point would the economy lie on the PPC? Explain your answer.
10. If the economy were producing at Y_2 , what would happen in the long run? Why?
11. What could cause a nation's LRAS to shift?
12. How would a rightward shift in LRAS be shown on the PPC?

The Tools of Fiscal Policy

Changes in federal taxes and federal government spending designed to affect the level of aggregate demand in the economy are called *fiscal policy*.

Aggregate demand is the total amount of spending on goods and services in the economy during a stated period of time. Aggregate demand consists of consumer spending, government spending, investment spending and net exports.

Aggregate supply consists of the total amount of goods and services available in the economy during a stated period of time.

During a recession, aggregate demand is usually too low to bring about full employment of resources. Government can increase aggregate demand by spending more, cutting taxes or doing both. These actions often result in budget deficits because the government spends more than it collects in taxes. Increasing government spending without increasing taxes or decreasing taxes without decreasing government expenditures should increase aggregate demand. Such an *expansionary fiscal policy* should increase employment, the price level or both.

If the level of aggregate demand is too high, creating inflationary pressure, government can reduce its spending, increase taxes or do both. These actions should result in a larger budget surplus or a smaller budget deficit than existed before. Such a *contractionary fiscal policy* should lower the level of aggregate demand, and the economy will experience less employment, a lower price level or both.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses* (New York: National Council on Economic Education, 1985), pp. 151-152

Part A

Decide whether each of the following fiscal policies of the federal government is expansionary or contractionary. Write *expansionary* or *contractionary*, and explain the reasons for your choice.

1. The government cuts business and personal income taxes and increases its own spending.
2. The government increases the personal income tax, Social Security tax and corporate income tax. Government spending stays the same.
3. Government spending goes up while taxes remain the same.
4. The government reduces the wages of its employees while raising taxes on consumers and businesses. Other government spending remains the same.

Part B

Effects of Fiscal Policy

Test your understanding of fiscal policy by completing the table in Figure 30.1. Your choices for each situation must be consistent — that is, you should choose either an expansionary or contractionary fiscal policy. (Fiscal policy cannot provide a solution to one of the situations.) Fill in the spaces as follows:

Column A: Objective for Aggregate Demand

- Draw an up arrow if you wish to increase aggregate demand.
- Draw a down arrow if you wish to decrease aggregate demand.

Column B: Action on Taxes

- Draw an up arrow if you wish to increase taxes.
- Draw a down arrow if you wish to decrease taxes.

Column C: Action on Government Spending

- Draw an up arrow if you wish to increase government spending.
- Draw a down arrow if you wish to decrease government spending.

Column D: Effect on Federal Budget

- Write *toward deficit* if your action will increase the deficit (or reduce the surplus).
- Write *toward surplus* if your action will reduce the deficit (or increase the surplus).

Column E: Effect on the National Debt

- Draw an up arrow if you think the national debt will increase.
- Draw a down arrow if you think the national debt will decrease.



Figure 30.1
Effects of Fiscal Policy

	(A) Objective for Aggregate Demand	(B) Action on Taxes	(C) Action on Government Spending	(D) Effect on Federal Budget	(E) Effect on the National Debt
1. National unemployment rate rises to 12 percent.					
2. Inflation is strong at a rate of 14 percent per year.					
3. Surveys show consumers are losing confidence in the economy, retail sales are weak and business inventories are increasing rapidly.					
4. Business sales and investment are expanding rapidly, and economists think strong inflation lies ahead.					
5. Inflation persists while unemployment stays high.					