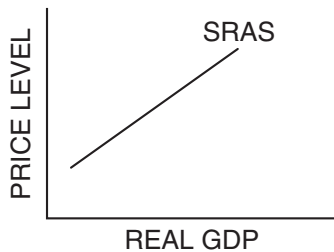


## An Introduction to Short-Run Aggregate Supply

### Why Is the Short-Run Aggregate Supply Curve Upward Sloping?

The short-run aggregate supply (SRAS) curve shows the relationship between real gross domestic product (GDP) and the price level. This positive relationship exists because producers seek to maximize profits and production costs are inflexible. Since firms seek to maximize profits, change in the price level will affect the quantity that they produce. When the price level rises, but production costs stay the same, firms make more profit on each unit sold, so they increase the quantity that they produce. When the price level decreases, but production costs stay the same, firms make less profit, and they reduce the quantity that they produce. In the long run, when production costs are flexible, this relationship does not hold true. But in the short run, inflexible production costs lead to a positive relationship between the price level and real GDP and therefore an upward sloping SRAS curve.



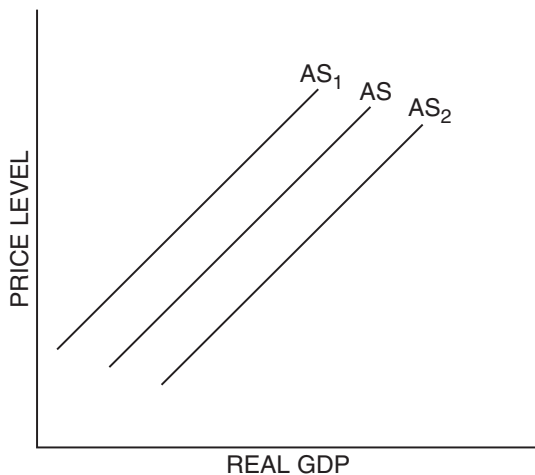
### What Shifts the Short-Run Aggregate Supply Curve?

SRAS will increase if firms produce more at any given price level, and it will decrease if firms produce less at any given price level. Therefore, the SRAS curve will shift as a result of changes in input prices (e.g., nominal wages or oil prices) or productivity (e.g., technological advances), as shown in Figure 3-3.1.



Figure 3-3.1

### Shifts in Short-Run Aggregate Supply



1. Determine whether each change listed in Table 3-3.1 will cause an increase, decrease, or no change in aggregate supply (AS). Always start with AS.
2. In column 1, list which component of AS is affected: input prices or productivity.
3. In column 2, draw an up arrow if the change will cause an increase in AS, a down arrow if it will cause a decrease in AS, and write NC if it will not change AS.
4. In column 3, write the number of the AS curve after the change.



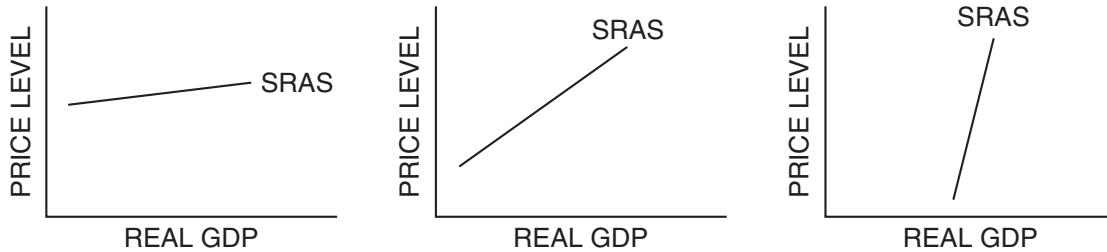
Table 3-3.1

**Changes in Aggregate Supply**

Change	1. Determinant of AS	2. Change in AS	3. Resulting AS curve
(A) Unions are more effective so that wage rates increase.	<i>Input prices</i>	↓	<b>AS<sub>1</sub></b>
(B) OPEC successfully increases oil prices.	<i>Input prices</i>	↓	<b>AS<sub>1</sub></b>
(C) Labor productivity increases dramatically.	<i>Productivity</i>	↑	<b>AS<sub>2</sub></b>
(D) Giant natural gas discovery decreases energy prices.	<i>Input prices</i>	↑	<b>AS<sub>2</sub></b>
(E) Computer technology brings new efficiency to industry.	<i>Productivity</i>	↑	<b>AS<sub>2</sub></b>
(F) Government spending increases.	<b>N/A</b>	<b>NC (affects AD)</b>	<b>AS</b>
(G) Cuts in tax rates increase incentives to save and invest.	<b>N/A</b>	<b>NC</b>	<b>AS</b>
(H) Low birth rate will decrease the labor force in the future.	<i>Input prices</i>	<b>NC (until the future)</b>	<b>AS</b>
(I) Research shows that improved schools have increased the skills of American workers and managers.	<i>Productivity</i>	↑	<b>AS<sub>2</sub></b>

### Possible Shapes of Short-Run Aggregate Supply Curve

In general, the SRAS has a positive slope. However, in special situations, the SRAS may be very flat or very steep, as shown below.



5. What does it tell you about the relationship between the price level and real GDP if the SRAS is flat? Under what conditions would an economy have a flat SRAS curve?

***It tells you that real GDP and the price level are not related. This could happen when there are a lot of unemployed resources or a constant price level as in a recession or depression.***

6. What does it tell you about the relationship between the price level and real GDP if the SRAS is steep? Under what conditions would an economy have a steep SRAS curve?

***It tells you that changes in real GDP are not possible, only changes in the price level. This happens at the full employment level when any increase in AD will only result in an increase in prices.***