Chapter 28: Inflation, Jobs, and the Business Cycle

Inflation Cycles

In the long run, inflation occurs if the quantity of money grows faster than potential GDP.

In the short run, many factors can start an inflation, and real GDP and the price level interact.

To study these interactions, we distinguish between two sources of inflation:

- Demand-pull inflation
- Cost-push inflation

Demand-Pull Inflation

An inflation that starts because aggregate demand increases is called **demand-pull inflation**.

Demand-pull inflation can begin with any factor that increases aggregate demand.

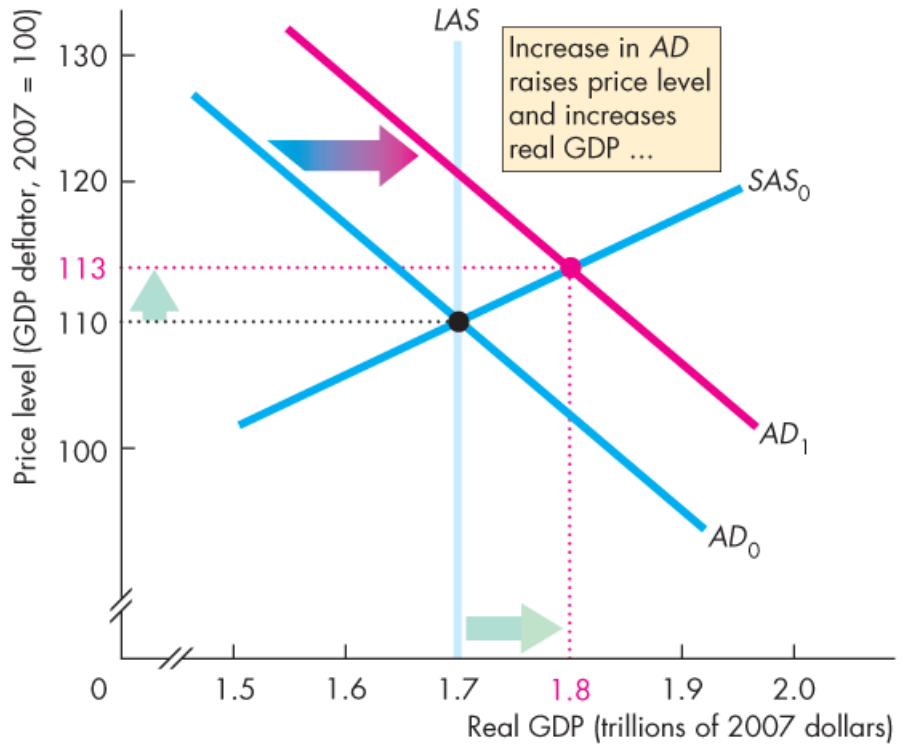
Examples are a cut in the interest rate,

Initial Effect of an Increase in Aggregate Demand

Starting from full employment, an increase in aggregate demand shifts the *AD* curve rightward.

The price level rises, real GDP increases, and an inflationary gap arises.

The rising price level is the first step in the demand-pull inflation.

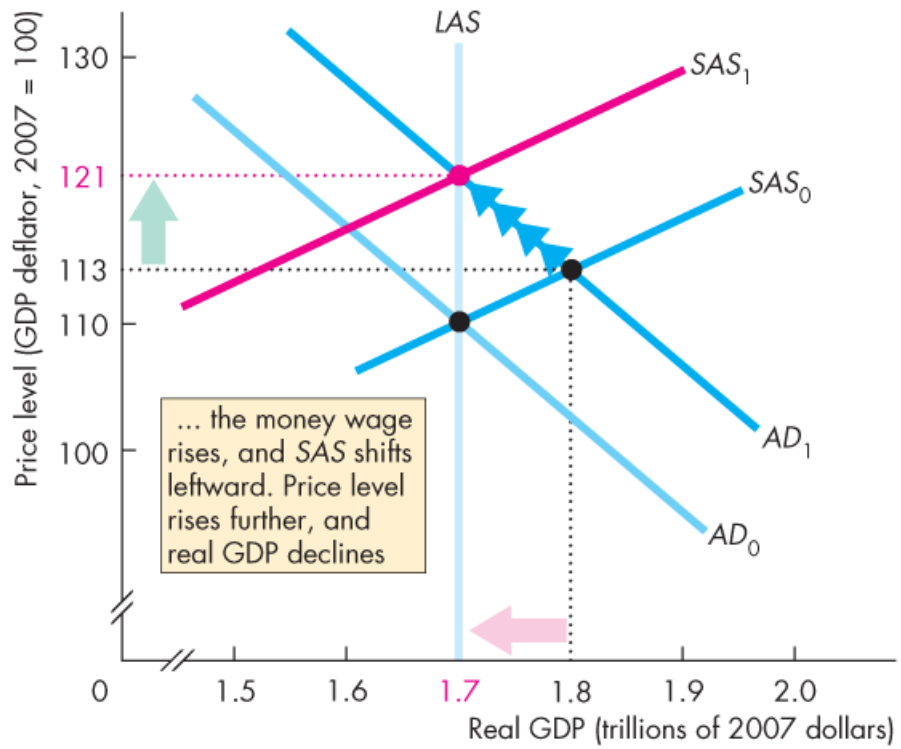


(a) Initial effect

Money Wage Rate Response

The money wage rate rises and the *SAS* curve shifts leftward.

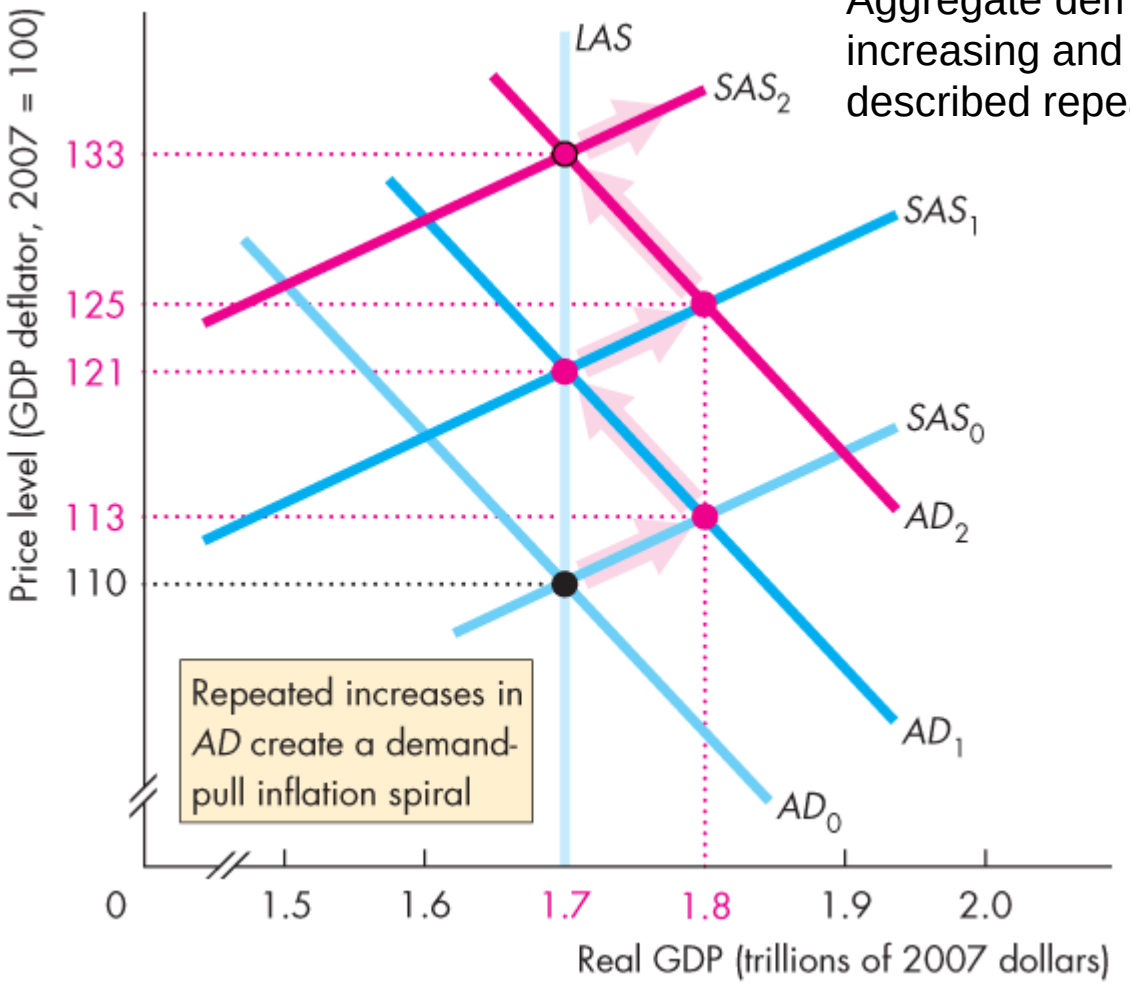
The price level rises and real GDP decreases back to potential GDP.



(b) The money wage adjusts

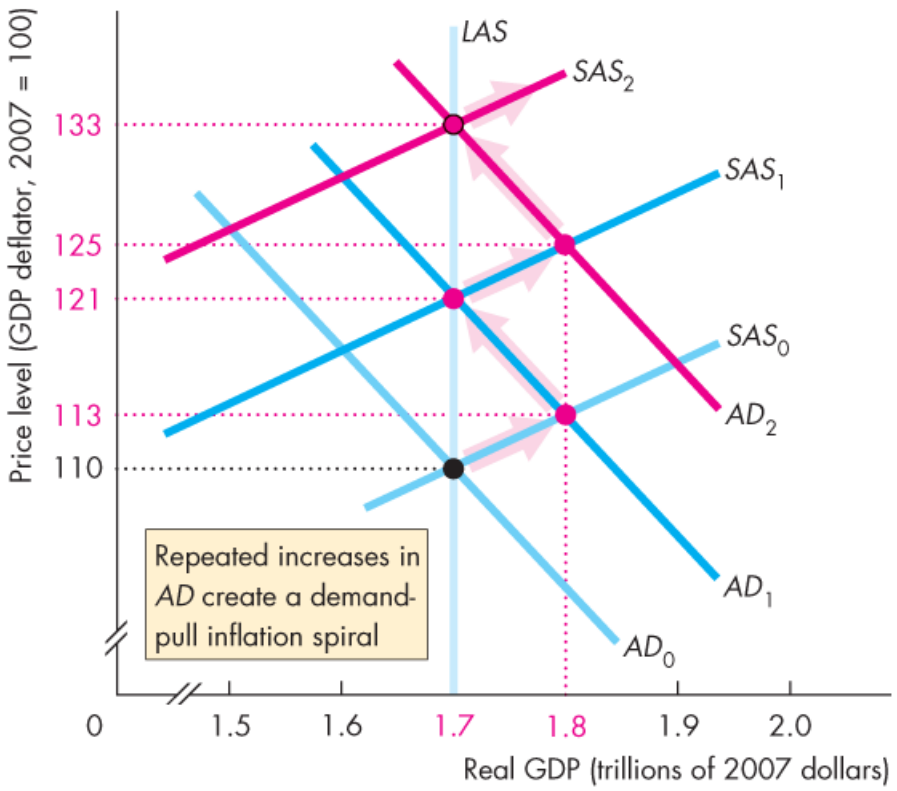
A demand-pull inflation spiral

Aggregate demand keeps increasing and the process just described repeats indefinitely.



Although any of several factors can increase aggregate demand to start a demand-pull inflation, *only an ongoing increase in the quantity of money can sustain it*.

A demand-pull inflation occurred in Canada in the 1960s.



Cost-Push Inflation

An inflation that starts with an increase in costs is called **cost-push inflation**.

There are two main sources of increased costs:

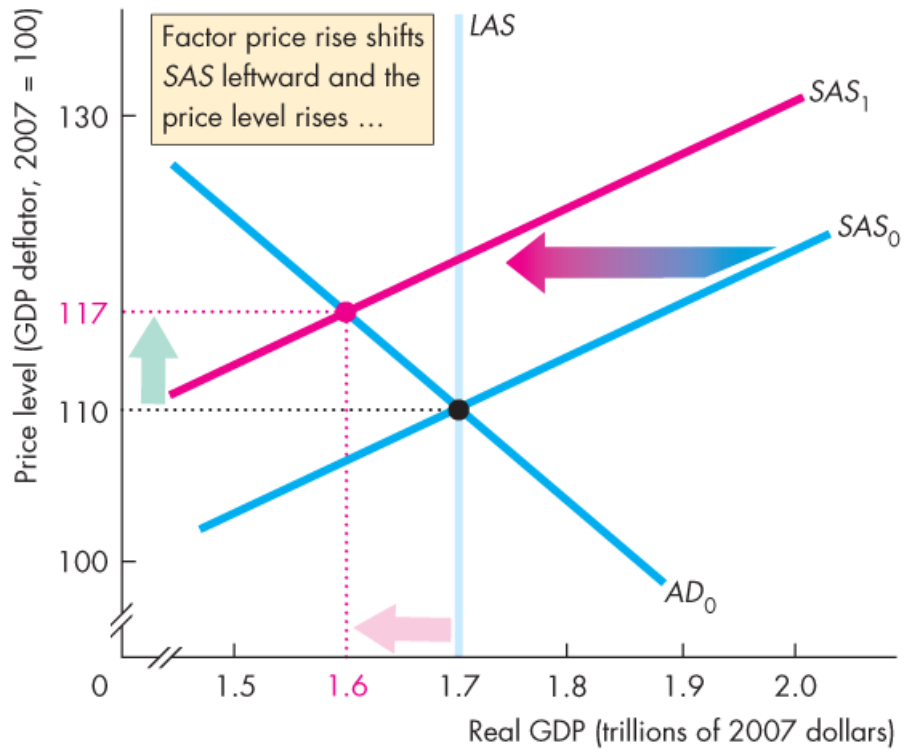
1. An increase in the money wage rate

2. An increase in the money price of raw materials, such as oil

Initial Effect of a Decrease in Aggregate Supply

A rise in the price of oil decreases short-run aggregate supply and shifts the *SAS* curve leftward.

Real GDP decreases and the price level rises.



(a) Initial cost push

Aggregate Demand Response

The initial increase in costs creates a *one-time* rise in the price level, not inflation.

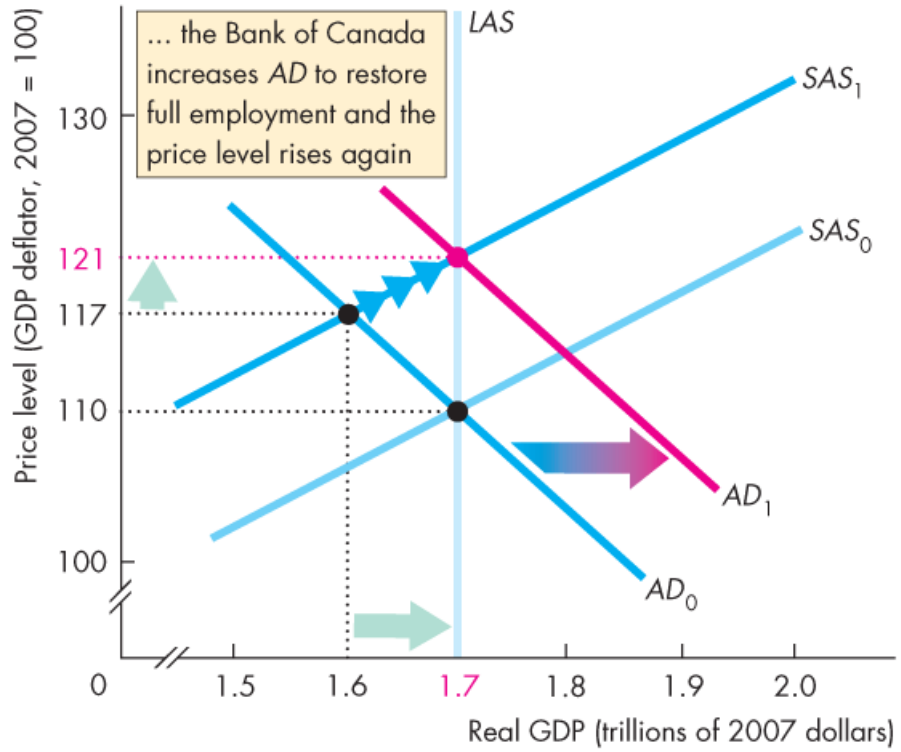
To create inflation, aggregate demand must increase.

That is, the BOC must increase the quantity of money persistently.

Response of aggregate demand.

The Bank of Canada stimulates aggregate demand to counter the higher unemployment.

Real GDP increases and the price level rises again.



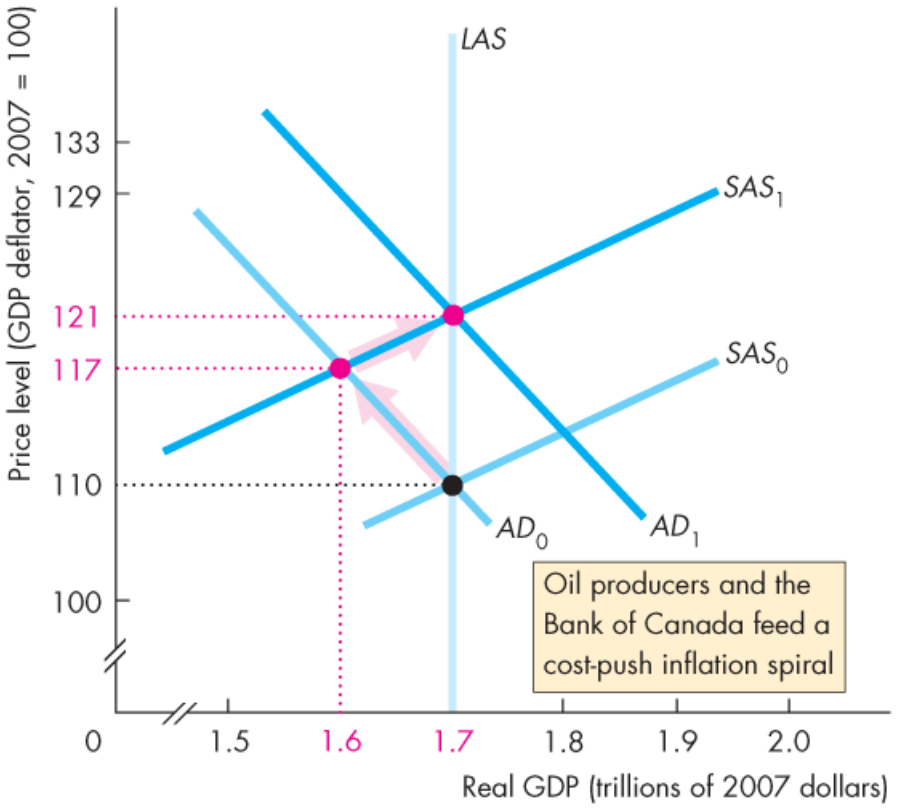
(b) The Bank of Canada responds

A Cost-Push Inflation Process

If the oil producers raise the price of oil to try to keep its relative price higher, …

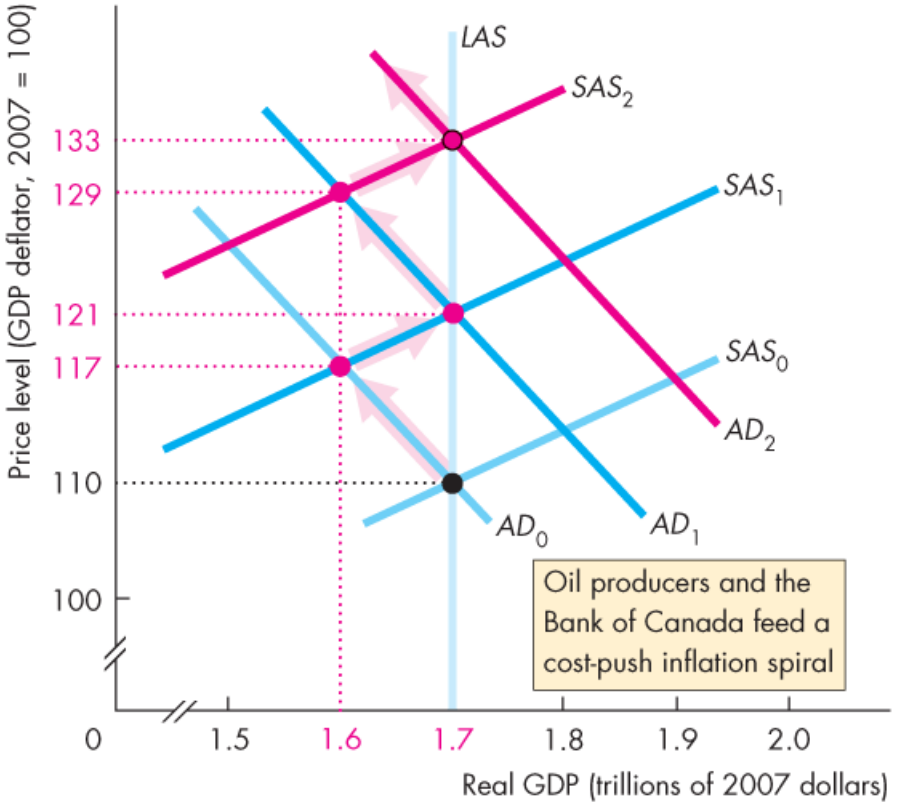
and the Bank of Canada responds by increasing the quantity of money, …

a process of cost-push inflation continues.



The combination of a rising price level and a decreasing real GDP is called **stagflation**.

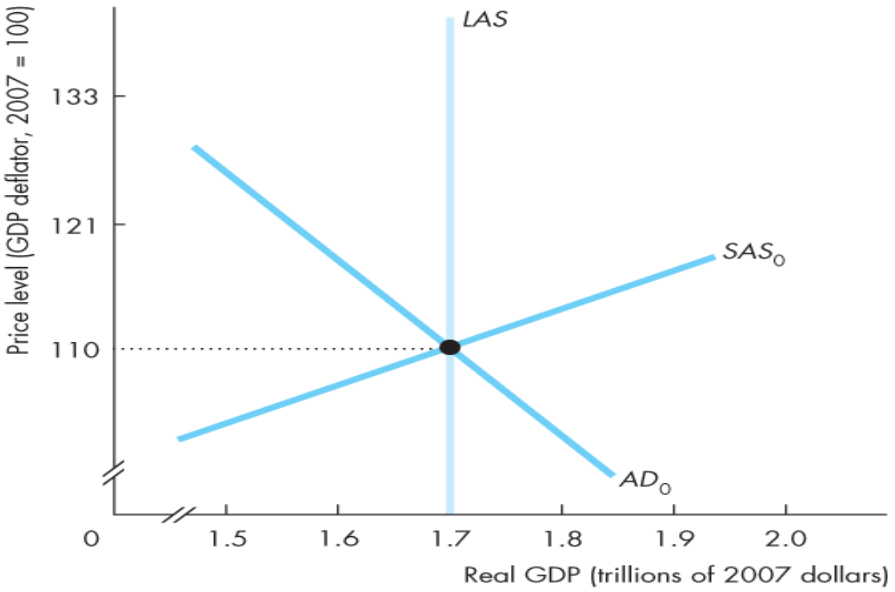
Cost-push inflation occurred in Canada during the 1970s when the Bank responded to the OPEC oil price rise by increasing the quantity of money.

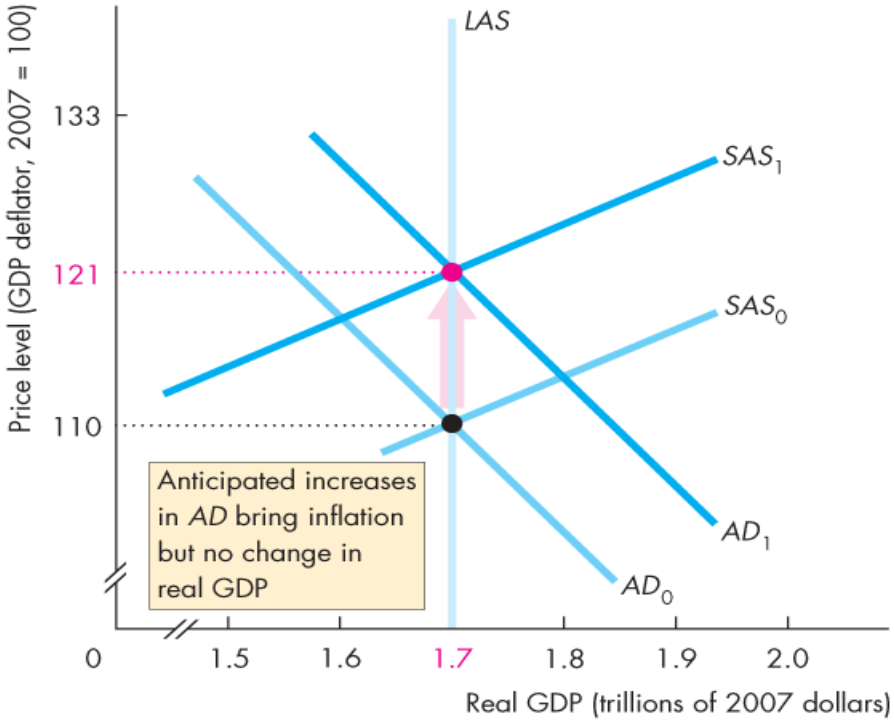


Expected Inflation

Aggregate demand increases, but the increase is expected, so its effect on the price level is expected.

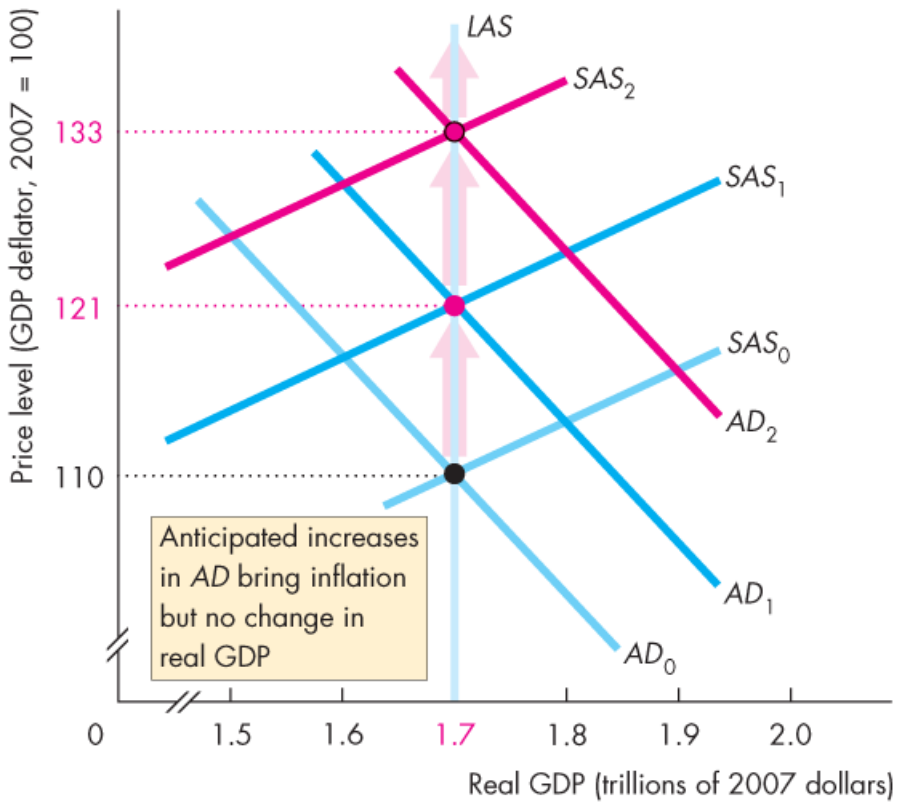
The money wage rate rises in line with the expected rise in the price level.





The price level rises as expected and real GDP remains at potential GDP.

The process repeats.



Forecasting Inflation

To expect inflation, people must forecast it.

<u>Expectations formation:</u>

- The best forecast available is one that is based on all the relevant information and is called a rational expectation.

A rational expectation is not necessarily correct, but it is the best available.

- Adaptive Expectation

Inflation and the Business Cycle

When the inflation forecast is *correct*, the economy operates at full employment.

If aggregate demand grows *faste*r than expected, real GDP moves above potential GDP, the inflation rate exceeds its expected rate, and the economy behaves like it does in a demand-pull inflation.

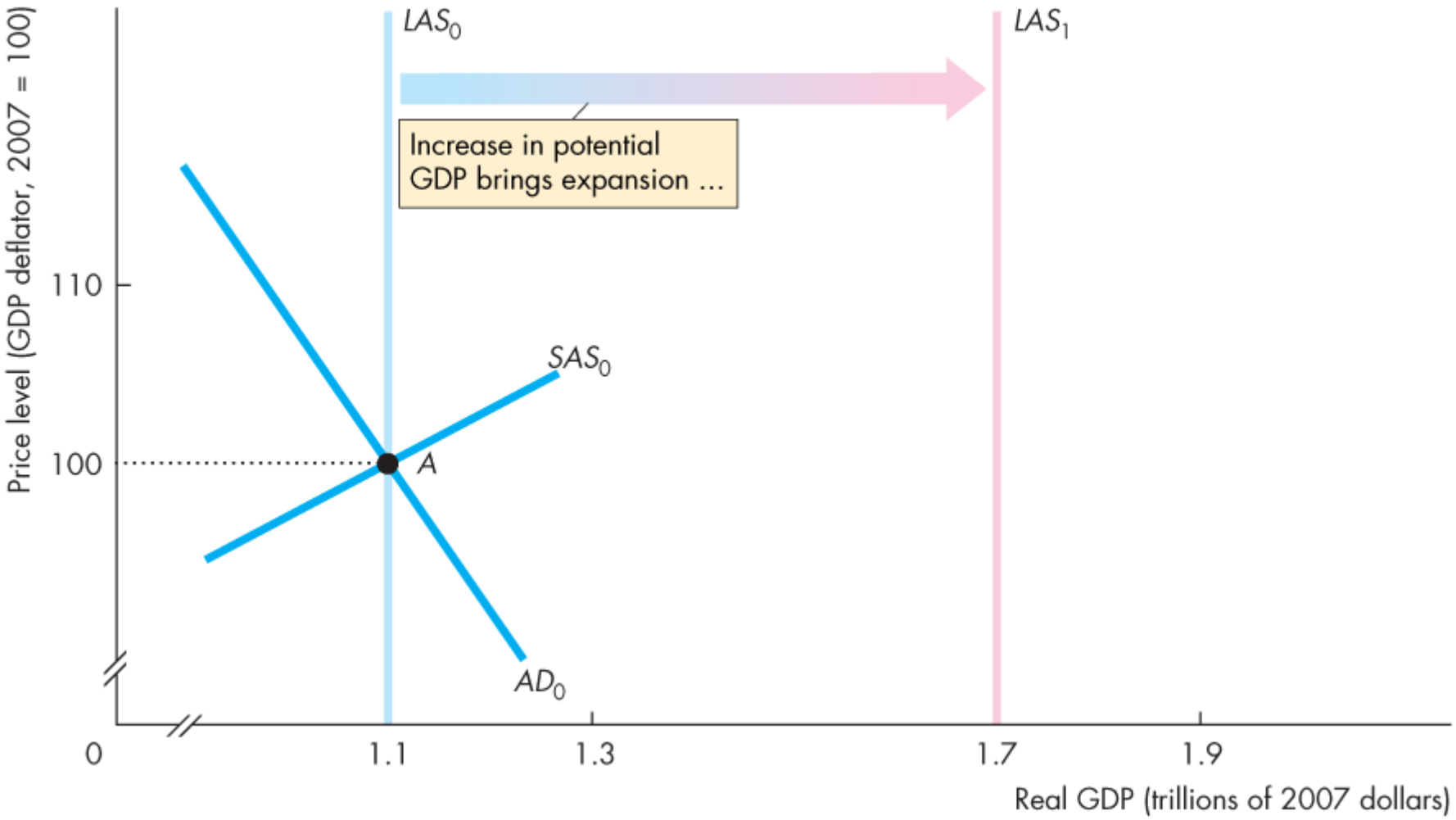
If aggregate demand grows *more slowly* than expected, real GDP falls below potential GDP, the inflation rate slows, and the economy behaves like it does in a cost-push inflation.

Mainstream Business Cycle Theory

Because potential GDP grows at a steady pace while aggregate demand grows at a fluctuating rate, real GDP fluctuates around potential GDP.

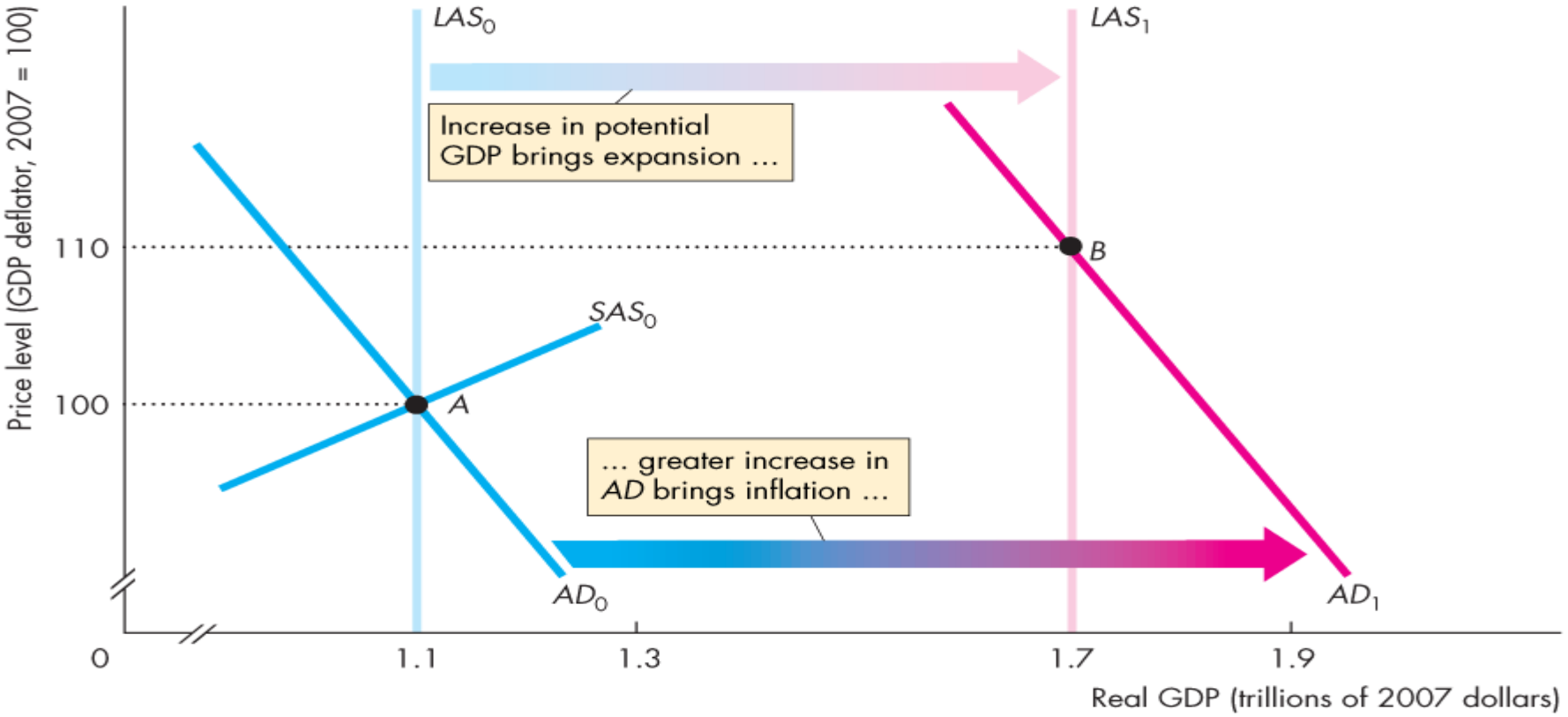
Initially, the economy is at full employment at point *A*.

Potential GDP increases and the *LAS* curve shifts rightward.



During an expansion, aggregate demand increases and usually by more than potential GDP.

The *AD* curve shifts *to* AD_1.

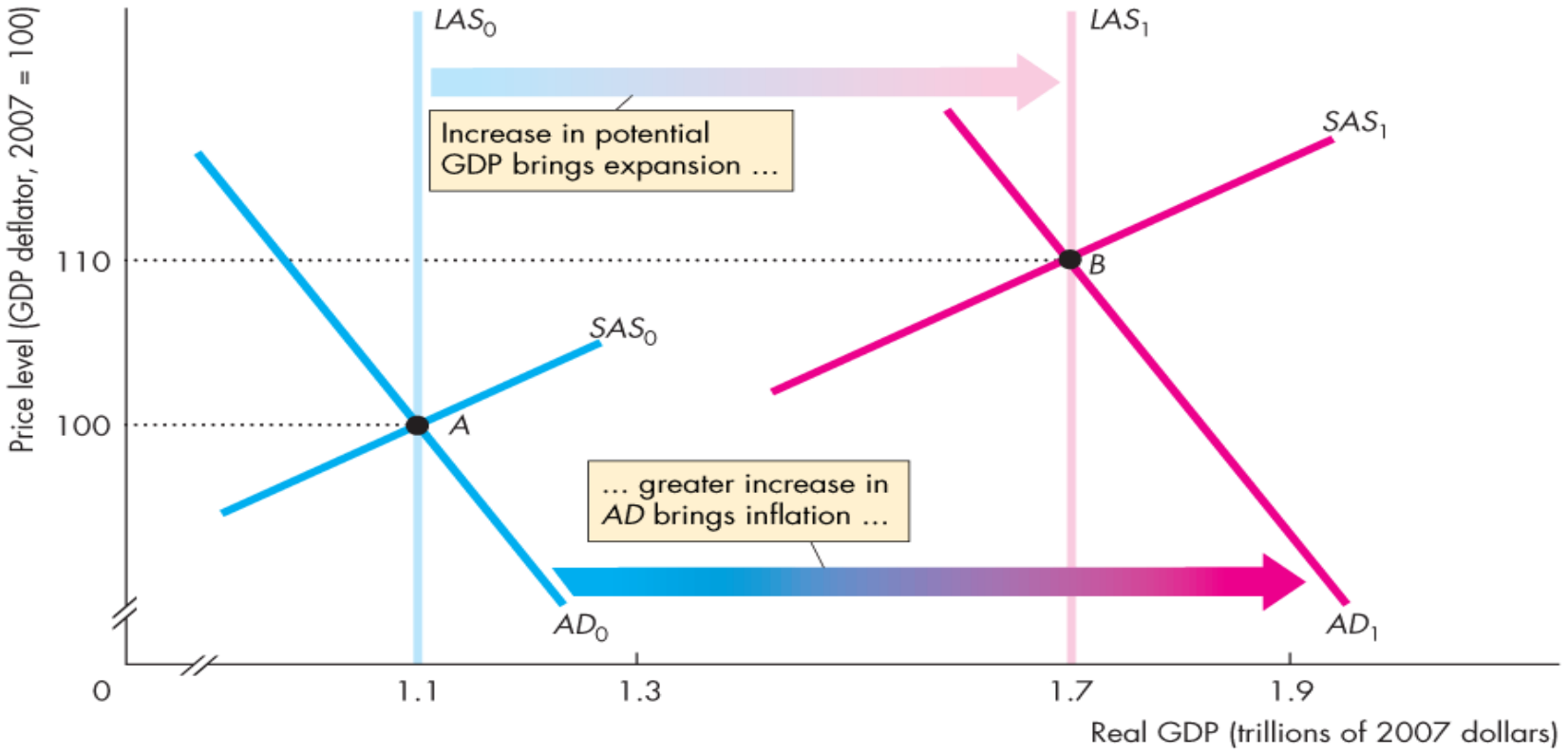


Assume that during this expansion the price level is expected to rise to 110 and that the money wage rate was set on that expectation.

The *SAS* shifts to SAS_1.

The economy remains at full employment at point *B*.

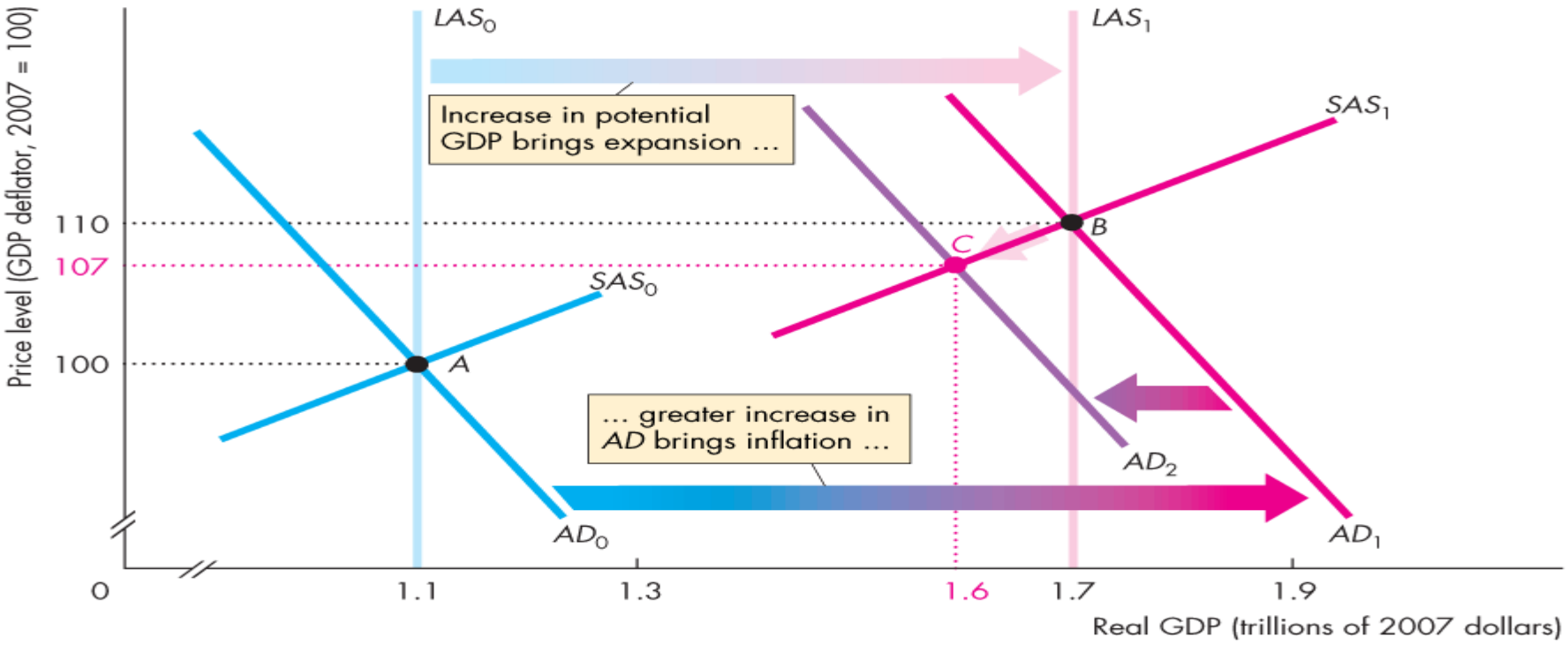
The price level rises as expected from 100 to 110.



But if aggregate demand increases more slowly than potential GDP, the *AD* curve shifts *to* AD_2.

The economy moves to point *C*.

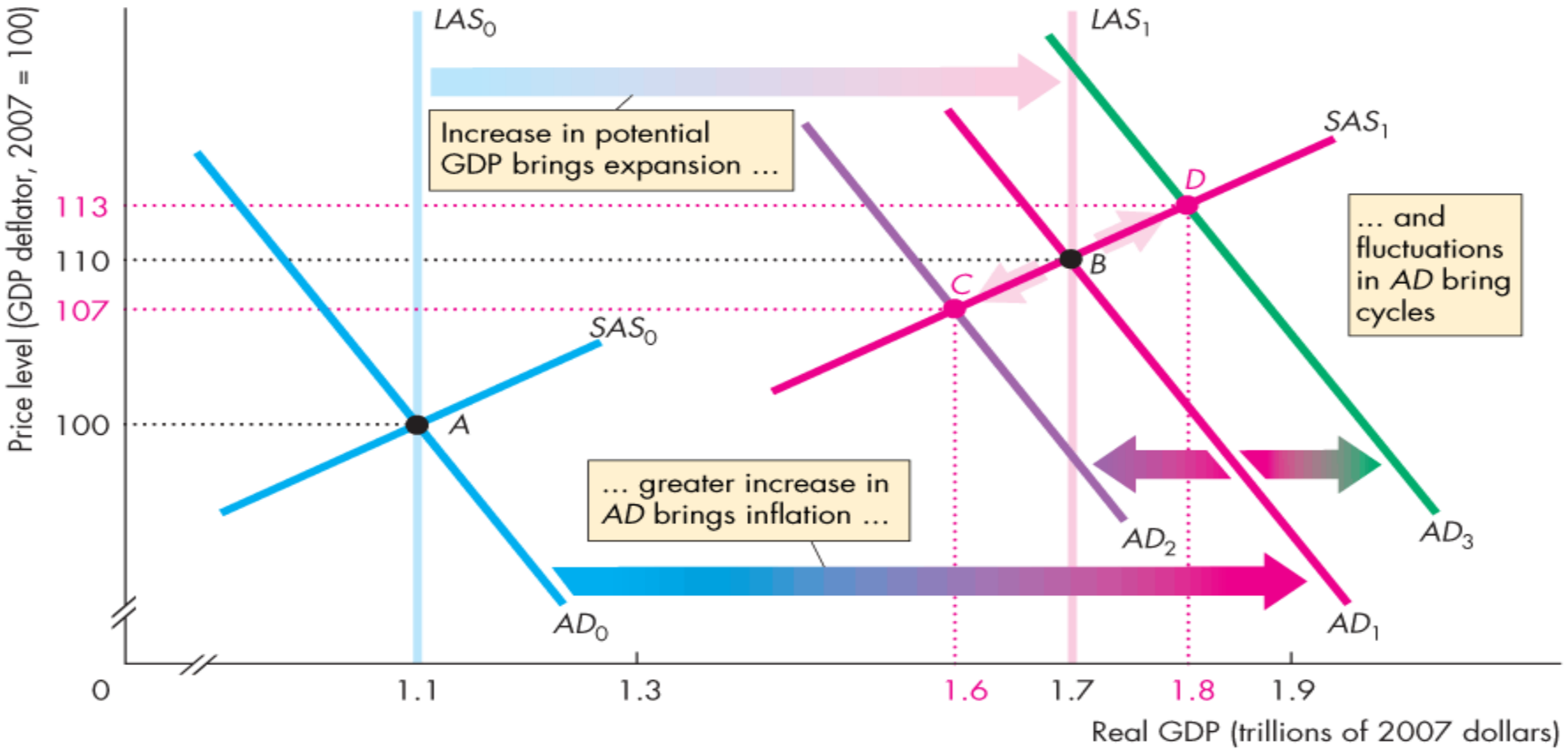
Real GDP growth is slower; inflation is less than expected.



But if aggregate demand increases more quickly than potential GDP, the *AD* curve shifts *to* AD_3.

The economy moves to point *D*.

Real GDP growth is faster; inflation is higher than expected.



Economic growth, inflation, and the business cycle arise from the relentless increases in potential GDP, faster (on average) increases in aggregate demand, and fluctuations in the pace of aggregate demand growth.