Macroeconomics

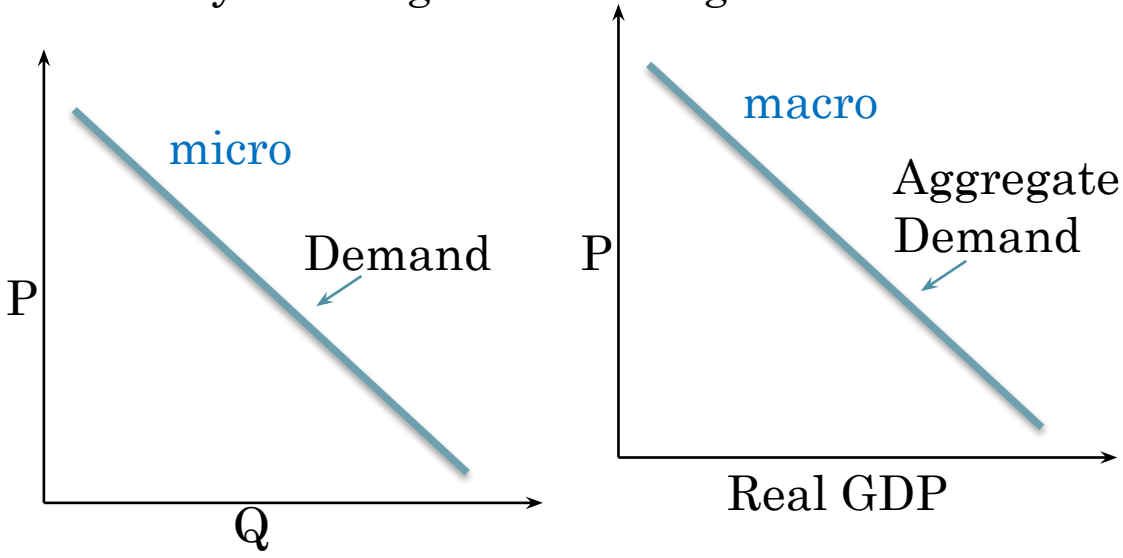
AGGREGATED SUPPLY AND DEMAND

Zharova Liubov

Aggregate Demand (AD)

- **Aggregate demand** is the total demand for goods and services

is an economic measurement of the sum of all final goods and services produced in an economy, expressed as the total amount of money exchanged for those goods and services.

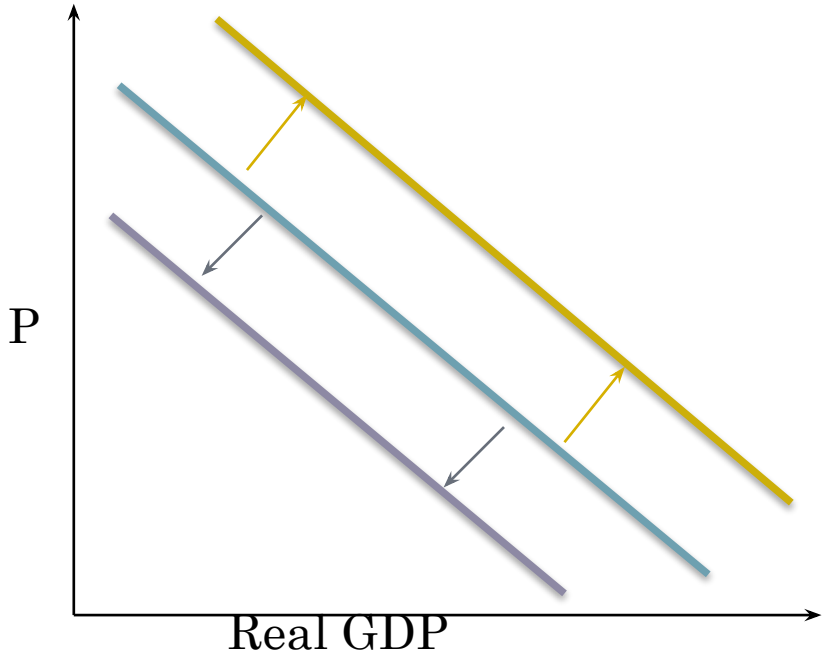


1. Wealth effect
2. Savings and Interest rate effect
3. Foreign exchange effect

AD = total spending on goods and services = Real GDP
AD = C+I+G+NX

C - Consumer spending on goods and services
I - Private investment and corporate spending for non-final capital goods (factories, equipment, etc.)
G - Government spending for public goods and social services (infrastructure, Medicare, etc.)
NX = Net exports (exports minus imports)

AD SHIFTS



AD = C+I+G+NX

change in consumption (eg cut tax)

Or tax increasing

Shifts in

- Investment
- Governmental spending
- Export

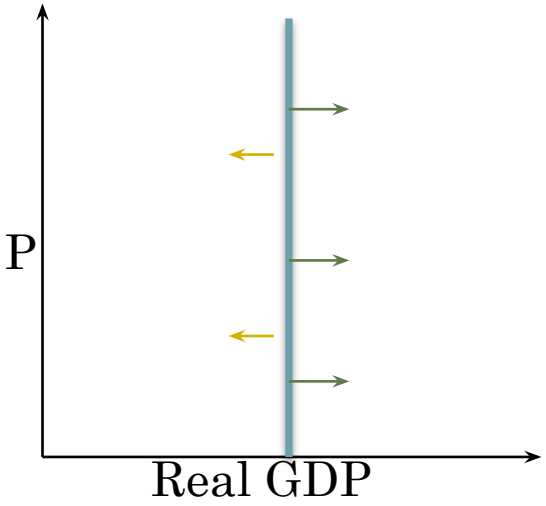
Aggregate supply (AS)

- (or total output) is the total supply of goods and services produced within an economy at a given overall price level in a given time period.

Components of AS

- **Consumer goods.** Private consumer goods and services, such as motor vehicles, computers, clothes and entertainment, are supplied by the private sector, and consumed by households.
- **Capital goods.** Capital goods, such as machinery, equipment, and plant, are supplied to other firms.
- **Public and merit goods.** Goods and services produced by private firms for use by central or local government, such as education and healthcare, are also a significant component of aggregate supply.
- **Traded goods.** Goods and services for export, such as chemicals, entertainment, and financial services are also a key component of aggregate supply.

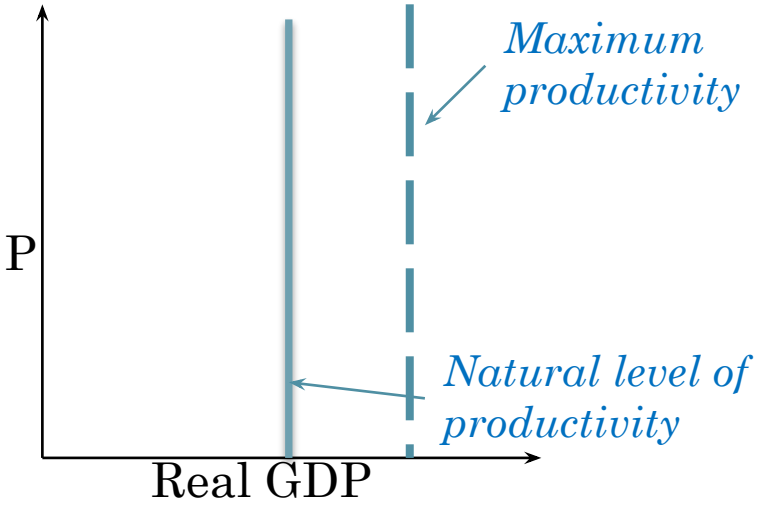
Long-run Aggregate supply (LRAS)



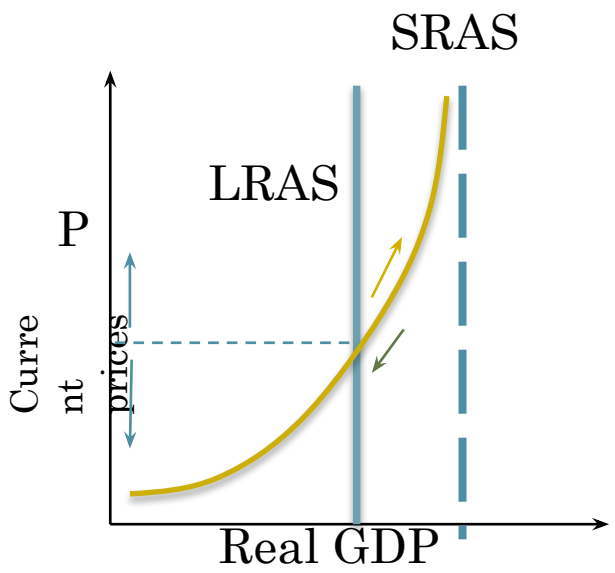
Supply = capability to produce

Population growth

Easy to find a job (training…)
More productive (new resources…)
…
War, conflicts …



Sort-run Aggregate Supply (SRAS)



- Rising the price – labor pool, work more, less vacation…
- Decreasing price – more leisure time…

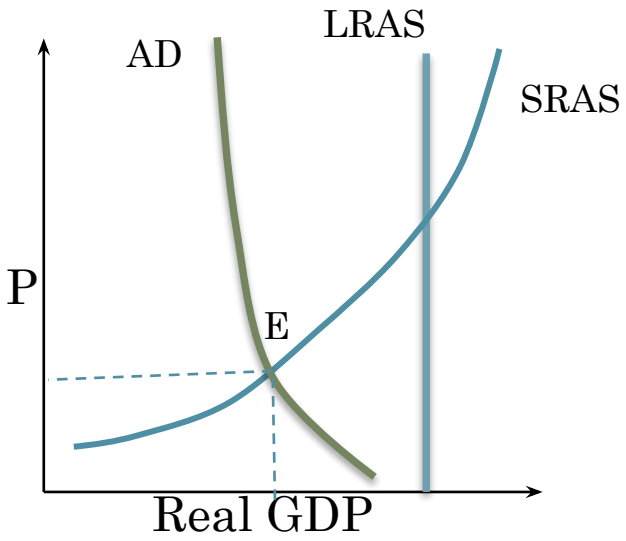
Shape

1. Misperception theory:
2. Sticky wages (cost/prices) theory

Summirising

- **Aggregate supply** is the total quantity of output firms will produce and sell – in other words, the real GDP.
- The upward-sloping **aggregate supply curve** – also known as the **short run aggregate supply curve** – shows the positive relationship between price level and real GDP in the short run.
- The aggregate supply curve slopes up because when the price level for outputs increases while the price level of inputs remains fixed, the opportunity for additional profits encourages more production.
- **Potential GDP**, or **full-employment GDP**, is the maximum quantity that an economy can produce given full employment of its existing levels of labor, physical capital, technology, and institutions.
- **Aggregate demand** is the amount of total spending on domestic goods and services in an economy.
- The downward-sloping **aggregate demand curve** shows the relationship between the price level for outputs and the quantity of total spending in the economy.

Equilibrium in the aggregate demand/aggregate supply model

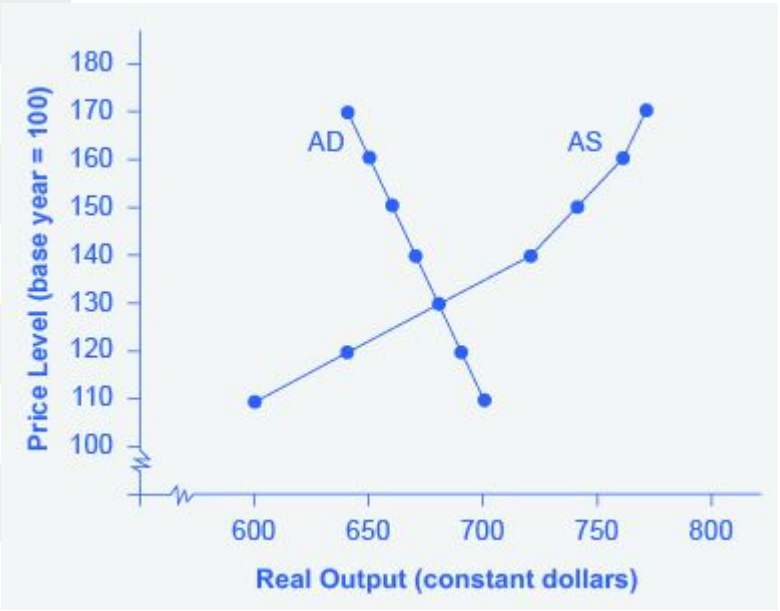


- At a relatively low price level for output, firms have little incentive to produce, although consumers would be willing to purchase a high quantity. As the price level for outputs rises, aggregate supply rises and aggregate demand falls until the equilibrium point is reached.

Conclusions
If equilibrium occurs in the flat range of AS, then economy is not close to potential GDP and will be experiencing unemployment but stable price level. If equilibrium occurs in the steep range of AS, then the economy is close to or at potential GDP and will be experiencing rising price levels or inflationary pressures, but will have a low unemployment rate.

Price level: aggregate demand/aggregate supply

Price level	Aggregate demand	Aggregate supply
110	$700	$600
120	$690	$640
130	$680	$680
140	$670	$720
150	$660	$740
160	$650	$760
170	$640	$770



Conclusions: the equilibrium is fairly far from where the AS curve becomes steep. This implies that the economy is not close to potential GDP. Thus, unemployment will be high, and changes in the price level are likely to be small.

Example

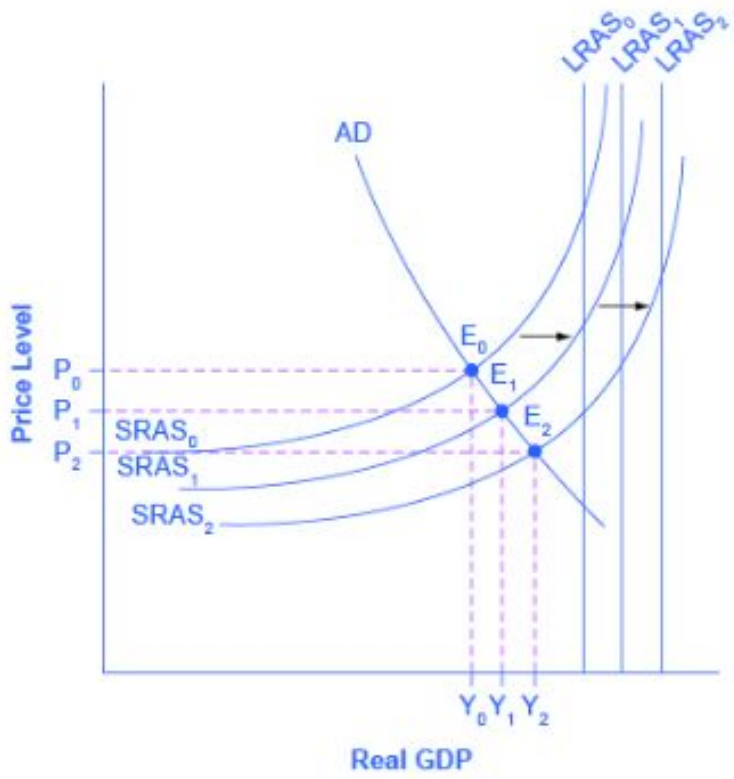
- **Bebebe.** The imaginary country of Bebebe has the aggregate supply and aggregate demand curves given in the table below.
- Plot an AD/AS diagram from the data above. Identify the equilibrium.
- Would you expect unemployment in this economy to be relatively high or low? Would you expect concern about inflation in this economy to be relatively high or low?
- Imagine that consumers begin to lose confidence about the state of the economy, so AD becomes lower by 275 at every price level.
- Identify the new aggregate equilibrium. How will the shift in AD affect the original output, price level, and employment?

Price level: AD/AS

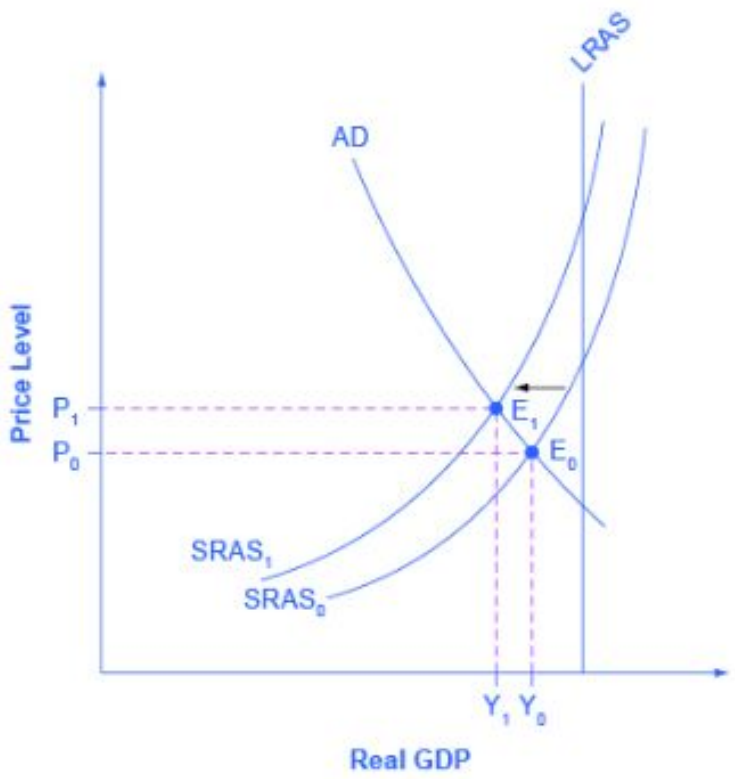
Price level	AD	AS
100	700	200
120	600	325
140	500	500
160	400	570
180	300	620

How productivity growth shifts the AS curve

- Over time, productivity grows so that the same quantity of labor can produce more output. Historically, the real growth in GDP per capita in an advanced economy like the United States has averaged about 2% to 3% per year, but productivity growth has been faster during certain extended periods.
- A higher level of productivity shifts the SRAS curve to the right because with improved productivity, firms can produce a greater quantity of output at every price level.



(a) Productivity growth shifts AS to the right



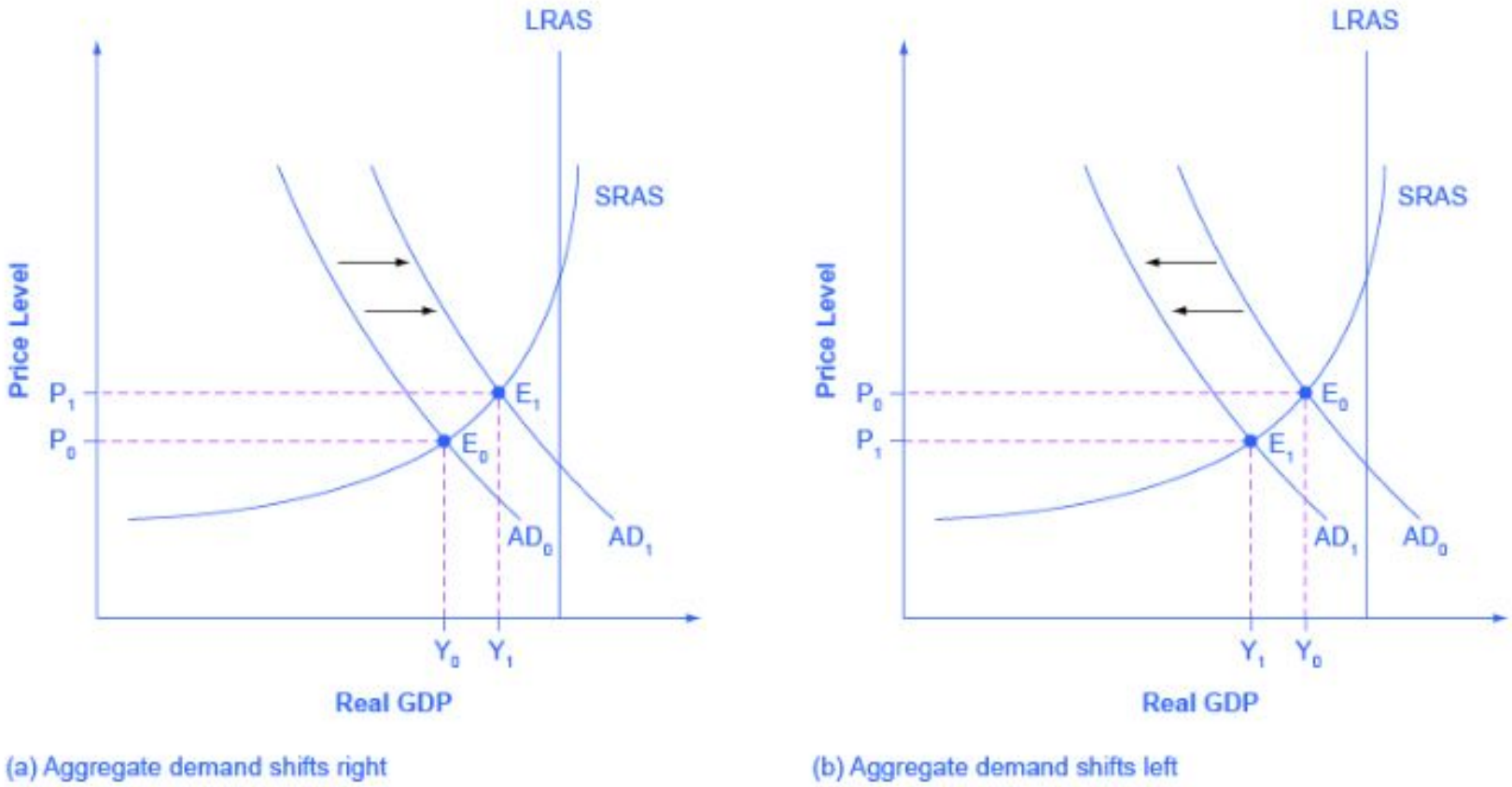
(b) Higher prices for key inputs shifts AS to the left

Summary

- The *aggregate demand/aggregate supply model* is a model that shows what determines total supply or total demand for the economy and how total demand and total supply interact at the macroeconomic level.
- Movements of either the aggregate supply or aggregate demand curve in an AD/AS diagram will result in a different equilibrium output and price level.
- The aggregate supply curve shifts to the right as productivity increases or the price of key inputs falls, making a combination of lower inflation, higher output, and lower unemployment possible.
- The aggregate supply curve shifts to the left as the price of key inputs rises, making a combination of lower output, higher unemployment, and higher inflation possible.
- When an economy experiences stagnant growth and high inflation at the same time it is referred to as *stagflation*.

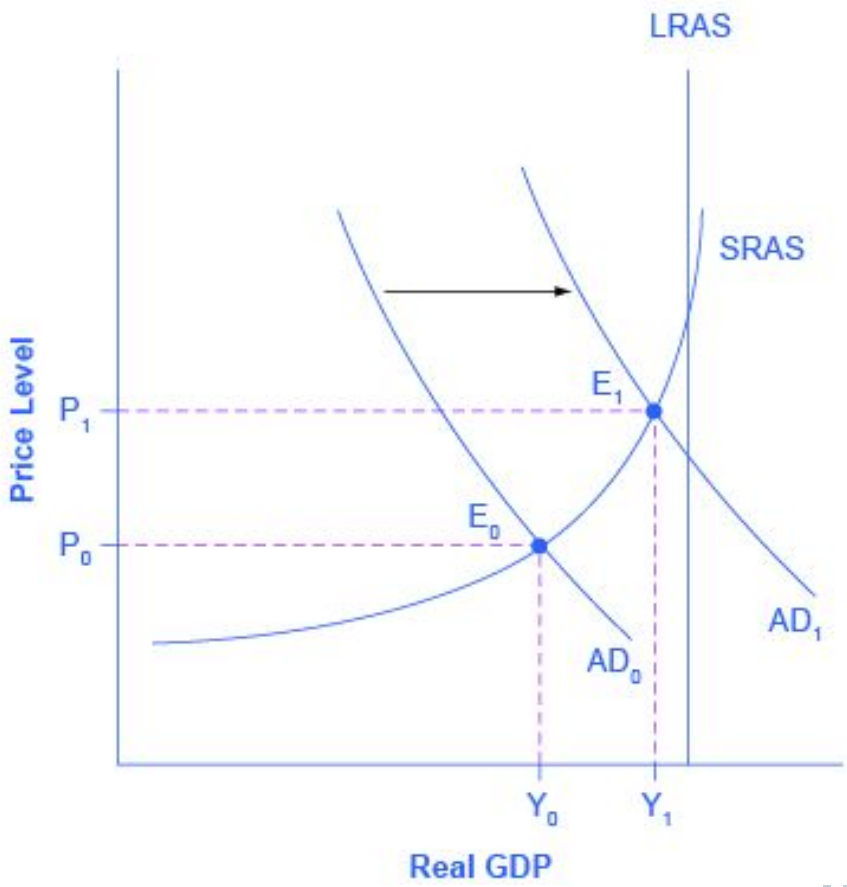
How do changes by consumers and firms affect AD?

- When consumers feel more confident about the future of the economy, they tend to consume more. If business confidence is high, then firms tend to spend more on investment, believing that the future payoff from that investment will be substantial. On the other hand, if consumer or business confidence drops, then consumption and investment spending decline.
- Consumer and business confidence often reflect macroeconomic realities. For example, confidence is usually high when the economy is growing briskly and low during a recession. However, economic confidence can sometimes rise or fall due to factors that do not have a close connection to the immediate economy, like a risk of war, election results, foreign policy events, or a pessimistic prediction about the future by a prominent public figure.



Government macroeconomic policy choices can shift AD.
Take, for example, government spending–one component of AD. Higher government spending causes AD to shift to the right–see Diagram A, on the left above–while lower government spending will cause AD to shift to the left–see Diagram B, on the right above.

- During a recession, when unemployment is high and many businesses are suffering low profits or even losses, the US Congress often passes tax cuts. During the recession of 2001, for example, a tax cut was enacted into law. At such times, the political rhetoric often focuses on how people going through hard times need relief from taxes. The aggregate supply and aggregate demand framework, however, offers a complementary rationale.



The original equilibrium during the recession is at point E0 relatively far from the full-employment level of output. The tax cut, by increasing consumption, shifts the AD curve to the right. At the new equilibrium E1 real GDP rises and unemployment falls and – because in this diagram the economy has not yet reached its potential or full-employment level of GDP – any rise in the price level remains muted.

Summary

- The *aggregate demand/aggregate supply model* is a model that shows what determines total supply or total demand for the economy and how total demand and total supply interact at the macroeconomic level.
- The aggregate demand curve shifts to the right as the components of aggregate demand–consumption spending, investment spending, government spending, and spending on exports minus imports–rise. The AD curve will shift back to the left as these components fall.
- AD components can change because of different personal choices–like those resulting from consumer or business confidence–or from policy choices like changes in government spending and taxes.
- If the AD curve shifts to the right, then the equilibrium quantity of output and the price level will rise. If the AD curve shifts to the left, then the equilibrium quantity of output and the price level will fall.
- Whether equilibrium output changes relatively more than the price level or whether the price level changes relatively more than output is determined by where the AD curve intersects with the AS curve.