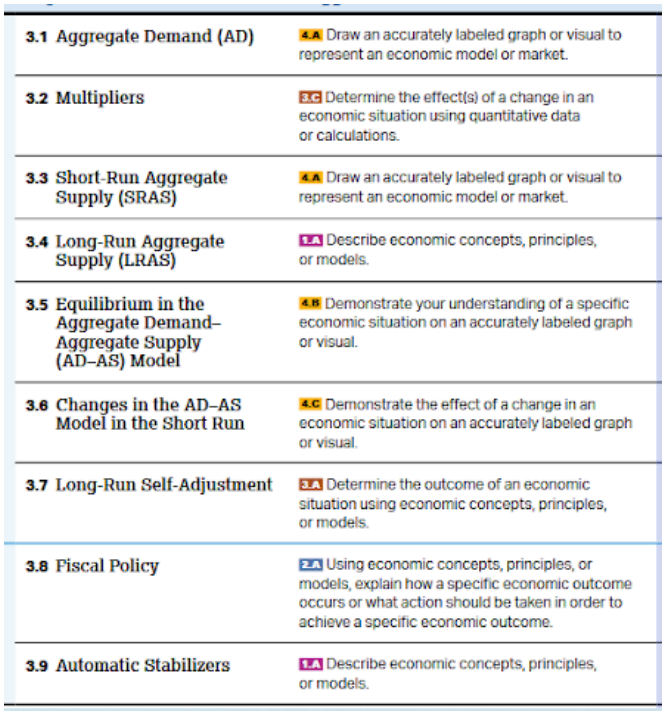
AP Dojo

AP Macroeconomics

Unit 3 - Cheat Sheet

Concepts covered on Unit 3 of the AP Macro exam



3.1 Aggregate Demand (AD)	4.A Draw an accurately labeled graph or visual to represent an economic model or market.
3.2 Multipliers	3.C Determine the effect(s) of a change in an economic situation using quantitative data or calculations.
3.3 Short-Run Aggregate Supply (SRAS)	4.A Draw an accurately labeled graph or visual to represent an economic model or market.
3.4 Long-Run Aggregate Supply (LRAS)	1.A Describe economic concepts, principles, or models.
3.5 Equilibrium in the Aggregate Demand–Aggregate Supply (AD–AS) Model	4.B Demonstrate your understanding of a specific economic situation on an accurately labeled graph or visual.
3.6 Changes in the AD–AS Model in the Short Run	4.C Demonstrate the effect of a change in an economic situation on an accurately labeled graph or visual.
3.7 Long-Run Self-Adjustment	3.A Determine the outcome of an economic situation using economic concepts, principles, or models.
3.8 Fiscal Policy	2.A Using economic concepts, principles, or models, explain how a specific economic outcome occurs or what action should be taken in order to achieve a specific economic outcome.
3.9 Automatic Stabilizers	1.A Describe economic concepts, principles, or models.

Things to Know:

1) Aggregate Demand and Aggregate Supply
2) How to draw and label a graph of AD / AS
3) Why the AD curve is downward sloping
4) Causes of shifts to the AD curve
5) Short-Run-Aggregate Supply (SRAS) & Long-Run Aggregate Supply (LRAS)
6) Causes of shifts to the SRAS curve
7) Causes of shifts the LRAS curve
8) Impact of shifts to the AD curve, SRAS curve, and LRAS on price level and real GDP
9) Equilibrium and Equilibrium Gaps

Topic 1: Aggregate Demand & Aggregate Supply

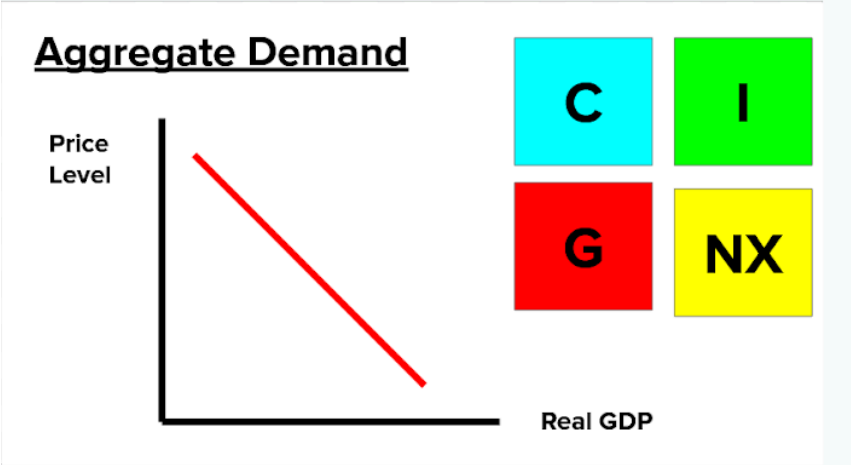
Aggregate Demand: refers to all the goods and services that consumers, firms, and governments are willing and able to purchase at various price levels

- Market demand shows the demand for a single good like milk
- Aggregate demand shows the demand for all goods and services
- We measure aggregate demand using Real GDP
- GDP = C + I + G + NX

Aggregate Supply: is the total supply of goods and services produced within an economy at a given overall price level in a given time period.

- **IMPORTANT**: there are two types of aggregate supply
- Short-Run-Aggregate Supply
- Long-Run Aggregate Supply

Topic 2: How to Draw and Label an AD / AS Graph



Key Difference Between Market Demand and AD / AS:

1) **Price Level on the Y-axis (a measure of the general price of goods and services in an economy)**

2) **Real GDP on the X-axis (a measure of total output)**

- **Remember that there are two supply curves (SRAS and LRAS)**

Topic 3: Why the Aggregate Demand Curve is Downward Sloping

- **Downward sloping means there is an inverse relationship**
- **Price Level UP, Real GDP DOWN**
- **GDP = C + I + G + NX**
- **Changes in price level impact the amount of C, I, NX that take place**

Real Wealth Effect: A decrease in the price level raises the real value of money and makes consumers wealthier, which in turn encourages them to spend more. The increase in consumer spending means a larger quantity of goods and services demanded. Conversely, an increase in the price level reduces the real value of money and makes consumers poorer, which in turn reduces consumer spending and the quantity of goods and services demanded (PL ↑ ⇒ C ↓ ⇒ GDP ↓)

Interest Rate Effect: ***A lower price level reduces the interest rate***, encourages greater spending on investment goods, and thereby increases the quantity of goods and services demanded. Conversely, a higher price level raises the interest rate, discourages investment spending, and decreases the quantity of goods and services demanded (PL ↑ ⇒ I ↓ ⇒ GDP ↓)

- Direct relationship between price level and interest rates (PL up, Interest Rates up)
- INverse relationship between interest rates and levels of investment (Interest Rates up, Investment down)

Exchange Rate Effect: When a fall in the U.S. price level causes U.S. interest rates to fall, the real value of the dollar declines in foreign exchange markets. This depreciation stimulates U.S. net exports and thereby increases the quantity of goods and services demanded. Conversely, when the U.S. price level rises and causes U.S. interest rates to rise, the real value of the dollar increases, and this appreciation reduces U.S. net exports and the quantity of goods and services demanded (PL ↑ ⇒ NX ↓ ⇒ GDP ↓)

- When US price level increases, interest rates rise

- When interest rates rise, the value of the US dollar rises
- When the value of the US dollar rises, US exports become more expensive and less demanded by foreign buyers
- As a result, net exports decreases

Topic 4: Causes of Shifts to the AD Curve

- Remember that shifts in the curve are caused by non-price factors
- Any change in Consumption, Investment, Government Spending or Net Exports can shift aggregate demand (C or I or G or NX)

Changes in Consumption:

- Concerns about a looming recession cause uncertainty amongst consumers, so they consume less (C ↓ ⇒ Aggregate Demand Shifts Left)
- A boom in the stock market causes consumer wealth to increase and as a result they spend more (C ↑ ⇒ Aggregate Demand Shifts Right)
- Consumers worry that prices will rise in the future, so they purchase more goods and services now (C ↑ ⇒ Aggregate Demand Shifts Right)

Changes in Investment:

- As the economy grows and profits increase, companies start to build more factories (I ↑ ⇒ Aggregate Demand Shifts Right)
- Business confidence decreases due to economic uncertainty, so companies spend less on investment (I ↓ ⇒ Aggregate Demand Shifts Left)

Changes in Government Spending:

- The US government votes to reduce funding to the military (G ↓ ⇒ Aggregate Demand Shifts Left)

- The US government passess a new infrastructure plan that increases funding to build roads and bridges (G ↑ ⇒ Aggregate Demand Shifts Right)

Changes in Net Exports:

- Europe experiences a recession, meaning its consumer have less money to buy US goods (NX ↓ ⇒ Aggregate Demand Shifts Left)
- The US signs a new trade agreement that allows for exports to more countries (NX ↑ ⇒ Aggregate Demand Shifts Right)

Topic 5: Short-Run AS & Long-Run AS

- Unlike the aggregate-demand curve, which always slopes downward, the aggregate-supply curve shows a relationship that depends crucially on the **time horizon** examined.
- In the short-run, the aggregate supply curve slopes upward, like a normal market supply curve
- In the long-run, the aggregate supply is a vertical line

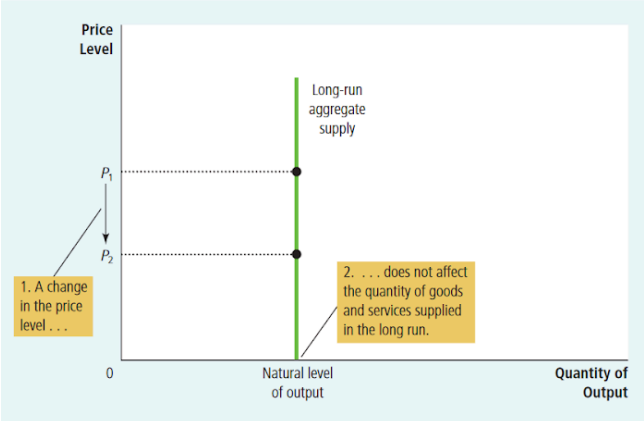
Short-Run Aggregate Supply Curve: shows the relationship between production and the price level in the short run

- change in price affects the quantity supplied (output)

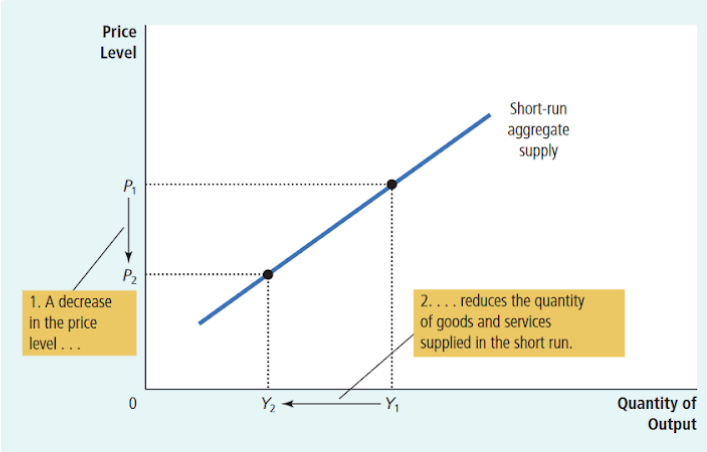
Long-Run Aggregate Supply Curve: shows the total amount of production that is possible in an economy given the efficient use of its resources

- the long-run aggregate supply curve is a vertical line at the economy's potential level of output
- where the vertical line is located depends on the levels of resources a country has
- A change in price does NOT impact output

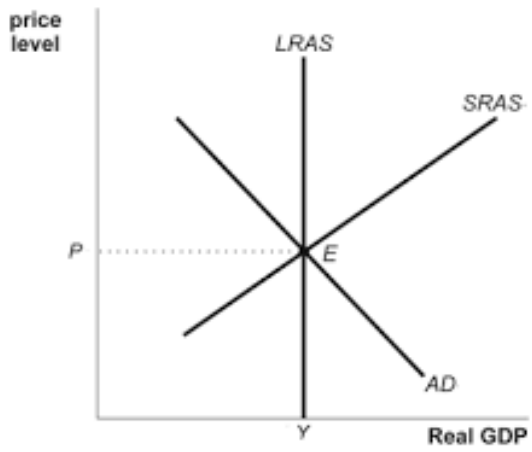
Long Run Aggregate Supply (LRAS)



Short Run Aggregate Supply (SRAS)



Both LRAS and SRAS



Topic 6: Causes of Shifts in the SRAS Curve

- Remember that shifts in the curve are caused by non-price factors

Changes in Resource (Input) Price / Availability:

- Wages rise, making labor more expensive. Companies can now afford to pay fewer workers (Wages ↑ ⇒ SRAS curve shifts left)
- Wood becomes more expensive. Therefore, home builders are able to build fewer homes (Resource ↑ ⇒ SRAS curve shifts left)

Government Policy:

- The government increases taxes on businesses. Now companies have less money to buy resources to produce stuff (Tax ↑ ⇒ SRAS curve shifts left)
- The government provides subsidies to businesses during a time of economic recession. Now businesses have more money to buy resources to produce stuff (Subsidy ⇒ SRAS curve shifts right)

Technology / Productivity:

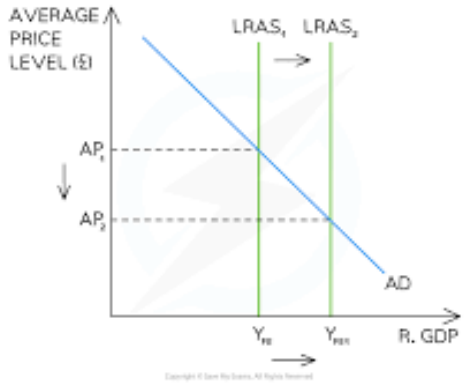
- New machines allow Tesla to more cars per day at a lower cost than before (SRAS curve shifts right)

Producer's Expectations about Future Prices:

- If a producer believes they will be able to sell for a higher price later, they will reduce their supply now
- If a producer believes they will be able to sell for a lower price later, they will increase their supply now

Topic 7: Causes of Shifts to the LRAS Curve

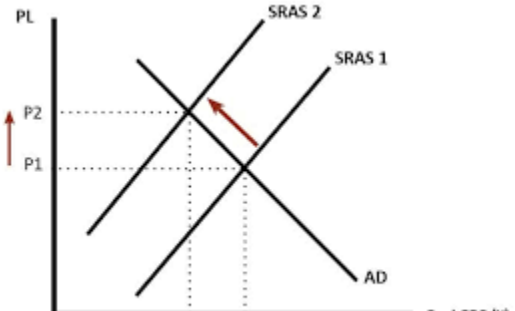
- Remember that the LRAS curve represents the output a country can produce using the resources that it has
- Any change in the resources (factors of production) can lead to a shift in the LRAS curve



An increase in labor caused by mass immigration might lead to a right shift in the LRAS curve

Topic 8: Impact of Shifts to the AD Curve, SRAS Curve, and LRAS Curve

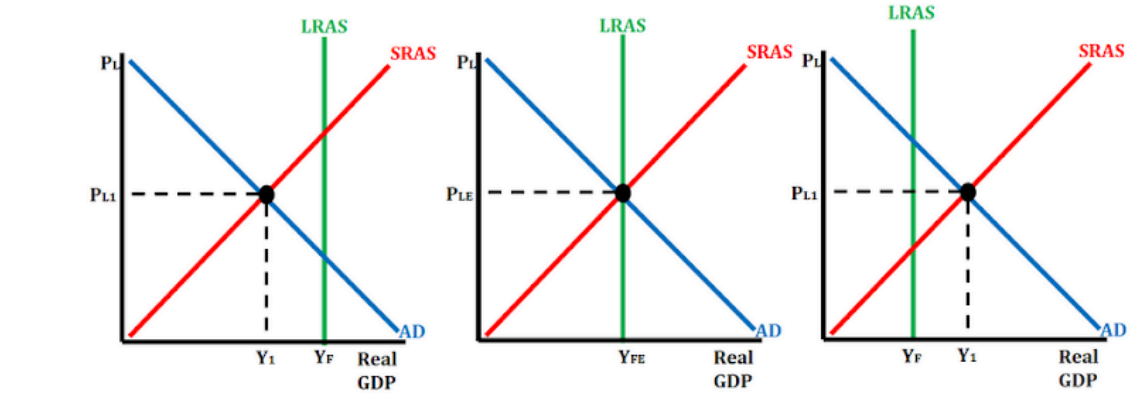
- When the SRAS or AD curve shifts, that changes the equilibrium
- To visualize how a situation will impact price level, output, and equilibrium, answer the following questions:
    - Does the event shift the SRAS curve or the AD curve? Or both?
    - Which direction does the curve shift?
    - After drawing the shift on your graph, determine if price level increased or decreased and if output increased or decreased



Example: The government increases taxes on business. This impacts SRAS, causing a leftward shift (decrease). As a result, the price level increase and real GDP decreases.

Topic 9: Getting Back to Long-Run Equilibrium

- Sometimes the economy is in a situation where it's producing below it's LRAS potential, or even beyond it's LRAS potential
- If SRAS and AD intersect to the LEFT of LRAS, there is a recessionary gap
- **Recessionary Gap**: occurs when a country's real GDP is lower than its GDP at full employment
- If SRAS and AD intersect to the RIGHT of LRAS, there is an inflationary gap
- **Inflationary Gap:** actual level of real GDP is greater than the potential level of GDP



Recessionary Gap (Negative Output Gap)

Economy at Full-Employment(Long-Run Equilibrium)

Inflationary Gap (Positive Output Gap)