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CONCEPT: AGGREGATE DEMAND

● The **aggregate demand and aggregate supply model (AD-AS Model)** explains short-run fluctuations in GDP and price

□ **Aggregate Demand** is closely related to our calculation for GDP

□ > Recall, that GDP = \_\_\_\_\_

□ > Aggregate demand follows the same rule as demand in a single market: \_\_\_\_\_

- As price levels fall, the quantity of real GDP demanded \_\_\_\_\_

Aggregate Demand Curve



● We are dealing with the economy as a whole, so we need *macroeconomic* explanations for the “DD”

□ In a single market,  $Q_d$  falls as  $P$  increases because customers \_\_\_\_\_ their demand to other goods

> Example: Apples and Oranges

□ The **wealth effect** describes how price levels affect \_\_\_\_\_

You have \$1. Candy costs \$1. → \_\_\_\_\_

You have \$1. Candy costs \$0.50. → \_\_\_\_\_

As price levels decrease, the **real value** of money \_\_\_\_\_, allowing you to purchase more goods ( $Q_d$  \_\_\_\_\_)

□ The **interest-rate effect** describes how price levels affect \_\_\_\_\_

> Prices decrease → Households save more → Interest rates \_\_\_\_\_ → Investment spending \_\_\_\_\_

□ For now, we will assume that *government spending stays constant*

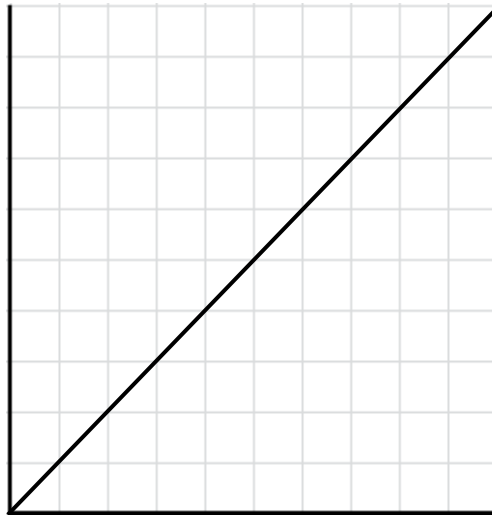
□ The **exchange-rate effect** describes how price levels affect \_\_\_\_\_

> Prices decrease → Foreign Demand \_\_\_\_\_ → Exports \_\_\_\_\_

CONCEPT: AGGREGATE DEMAND AND THE AGGREGATE EXPENDITURES MODEL

- The aggregate expenditures model can be used to derive the **aggregate demand curve**
  - Price levels are a determinant of consumption (lower prices, more consumption) → shift AE curve
  - Price levels are the y-axis of the aggregate demand graph → movement along AD curve

Aggregate Expenditures Model

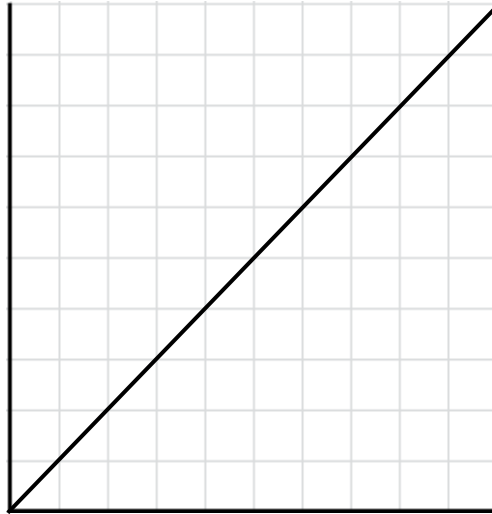


Aggregate Demand Curve



- The derivation is reinforced when we shift the AE curve due to a change in a determinant of AE:
  - > Example: Investment spending increases leading to an overall increase in aggregate expenditures

Aggregate Expenditures Model



Aggregate Demand Curve



**CONCEPT: SHIFTING AGGREGATE DEMAND**

- When factors other than the price level change, the aggregate demand curve will either shift left or right

- **Aggregate Demand** is closely related to our calculation for GDP

- > Recall, that GDP = \_\_\_\_\_

- > When we shifted market demand, we used the idea of “good” and “bad”

- “Good” for demand → \_\_\_\_\_

- “Bad” for demand → \_\_\_\_\_

- Factors that affect **consumption**:

- Interest Rates: Interest Rate ↑ → Consumption \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Income Taxes: Income Taxes ↑ → Consumption \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Expected Income: Expected Income ↑ → Consumption \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Factors that affect **investment**:

- Interest Rates: Interest Rate ↑ → Investment \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Business Taxes: Business Taxes ↑ → Investment \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Expected Profit: Expected Profit ↑ → Investment \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- Factors that affect **government purchases**:

- Amount: Amount of Government Purchases ↑ → Aggregate Demand \_\_\_\_\_

- Note: the government also affects aggregate demand through *monetary policy* and *fiscal policy*

- Factors that affect **net exports**:

- Relative GDP Growth: USA Growth ↑ → Net Exports \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- > US Consumers have more income leading imports to increase

- Exchange Rates: USD Value ↑ → Net Exports \_\_\_\_\_ → Aggregate Demand \_\_\_\_\_

- > Each USD has more buying power abroad leading imports to increase

CONCEPT: LONG RUN AGGREGATE SUPPLY

• The **aggregate demand and aggregate supply model (AD-AS Model)** explains short-run fluctuations in GDP and price

□ **Aggregate Supply** is different in the short-run and the long-run



> Long Run: The quantity of \_\_\_\_\_ depends on availability of \_\_\_\_\_

- Real GDP = goods and services produced

- Factors of production = labor, capital, natural resources, and available technology

> The current price level \_\_\_\_\_ affect Real GDP in the long run

- Real GDP is calculated using \_\_\_\_\_ prices

> Only the availability of factors of production affects the position of LRAS

Long Run Aggregate Supply Curve



• LRAS will shift when there is a change in one of the underlying factors of production:

Factor of Production	“Good” Example → Shift _____	“Bad” Example → Shift _____
Labor		
Physical Capital		
Human Capital		
Natural Resources		
Technology		

CONCEPT: SHORT RUN AGGREGATE SUPPLY

● The **aggregate demand and aggregate supply model (AD-AS Model)** explains short-run fluctuations in GDP and price

□ **Aggregate Supply** is different in the short-run and the long-run



> Short Run: The quantity of Real GDP is affected by current price levels

- Real GDP = goods and services produced

> In the short run, an increase in the price level will lead to \_\_\_\_\_ production of goods (and vice versa)

Short Run Aggregate Supply Curve



● There are three explanations why we can expect the SRAS to slope upwards:

□ **Sticky Wage Theory** says that wages (cost of labor) do not increase as quickly as the price level

> Profit = Selling Price – Cost

> Example: Union wages are set in contracts lasting several years; if economy booms, wages don't boom

□ **Sticky Price Theory** says that some prices do not increase in line with the price level because of **menu costs**

> **Menu Costs** – the costs businesses face from changing prices

> Example: Price level increases but a restaurant does not want to take the cost of printing new menus

- This restaurant will have lower prices, increasing their sales quantity, leading to higher output

□ **Misperceptions Theory** says that increases in general price levels cause firms to respond with increased output

**CONCEPT: SHIFTING SHORT RUN AGGREGATE SUPPLY**

- When factors other than the price level change, the aggregate supply curve will either shift left or right
  - **Aggregate Supply** is different in the short-run and the long-run
    - > Short Run: The quantity of Real GDP is affected by current price levels
      - Real GDP = goods and services produced
      - Factors of production = labor, capital, natural resources, and available technology
    - > The SRAS will shift based on short-term fluctuations in the availability of factors of production

- SRAS will shift when there is a change in one of the underlying factors of production:

Factor of Production	“Good” Example → Shift _____	“Bad” Example → Shift _____
Labor		
Physical and Human Capital		
Natural Resources		
Technology		

- SRAS will also shift when there is a change in expectations:

Expectation	“Good” Example → Shift _____	“Bad” Example → Shift _____
Future Price Level		
Supply Shock (unexpected event)		
Adjustment for Past Expectations		



CONCEPT: EQUILIBRIUM IN THE AD-AS MODEL

- The **aggregate demand and aggregate supply model (AD-AS Model)** explains short-run fluctuations in GDP and price
  - The long run equilibrium occurs at the point where AD and SRAS intersect with the LRAS curve.
    - > In a market supply and demand graph, we noted an \_\_\_\_\_ shaped equilibrium
    - > In the AD-AS model, the long-run equilibrium is \_\_\_\_\_ shaped

AD-AS Long-Run Equilibrium



- > In the AD-AS model, the short-run equilibrium can exist away from the long-run equilibrium

AD-AS Short-Run Equilibrium



**CONCEPT: EQUILIBRIUM IN THE AD-AS MODEL – SHIFTS IN AGGREGATE DEMAND**

- A shift in AD will always follow a three step process:
  - First, a shift occurs in AD (“Good” or “Bad”?)
  - Second, a new short-run equilibrium is found (Intersection of  $AD_2$  and  $SRAS_1$ )
  - Third, an opposite shift occurs in SRAS leading to a new long-run equilibrium → *SRAS finds LR equilibrium*
    - > Note that this third step takes time; it does not immediately follow the first shift
- A **decrease in AD** leads to a **recession and cyclical unemployment**

**EXAMPLE:** A decrease in expected future profit has led to decreased investment spending:

Decrease in Aggregate Demand



- An **increase in AD** is referred to as **demand-pull inflation** because the shift leads to a higher long-run equilibrium price

**EXAMPLE:** An increase in defense spending by the government:

Increase in Aggregate Demand

