Learning Objectives

• Explain what determines aggregate supply

• Explain what determines aggregate demand

• Explain macroeconomic equilibrium
Aggregate Demand

The quantity of real GDP demanded is the sum of the real consumption expenditure (C), investment (I), government purchases (G), and exports (X) minus imports (M).

\[ A_D = Y = C + I + G + X - M \]

Synonyms: \( A_D; AE; RGDP; NGDP; Y \)
Aggregate Demand

- Calculate the price elasticity at point c.'
Recall your micro 101

Price elasticity of demand

$$\frac{\Delta q}{q} = e \frac{\Delta p}{p}$$

Solve for $e$

$$e = \frac{\Delta q}{\Delta p} \cdot \frac{p}{q}$$

Slope $= \frac{\Delta p}{\Delta q}$
Calculate the price elasticity at point C'.

\[ \frac{\Delta RGDP}{RGDP} = e \frac{\Delta P}{P} \]

\[ e = \frac{1}{\Delta RGDP} \times \frac{P}{RGDP} \]

\[ e = \frac{1}{-20} \times \frac{110}{7} = -0.80 \]
### A 2 Commodity World

- **Apples**
- **Bananas**

<table>
<thead>
<tr>
<th>Demand</th>
<th>$\frac{\Delta P_A}{P_A}$</th>
<th>$\frac{\Delta P_B}{P_B}$</th>
<th>$\frac{\Delta Y}{Y}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{\Delta Q_A}{Q_A}$</td>
<td>-1</td>
<td>0</td>
<td>+1</td>
</tr>
<tr>
<td>$\frac{\Delta Q_B}{Q_B}$</td>
<td>0</td>
<td>-1</td>
<td>+1</td>
</tr>
</tbody>
</table>

### Inflation

- **Definition**

\[
\frac{\Delta P_A}{P_A} = \frac{\Delta P_B}{P_B} = \frac{\Delta Y}{Y}
\]
Inflation

- consequences

\[ \frac{\Delta Q_A}{Q_A} = 0 \]

\[ \frac{\Delta Q_B}{Q_B} = 0 \]

\[ \frac{\Delta RGDP}{RGDP} = 0 \]

Therefore

Does Chapter 6 subscribe to a vertical AD curve?
Inflation

- alternative definition

\[
\frac{\Delta P_A}{P_A} = \frac{\Delta P_B}{P_B} \quad \text{but} \quad \frac{\Delta Y}{Y} = 0
\]

- not realistic

- consequences

\[
\frac{\Delta Q_A}{Q_A} = -1 \cdot \frac{\Delta P_A}{P_A}
\]

\[
\frac{\Delta Q_B}{Q_B} = -1 \cdot \frac{\Delta P_B}{P_B}
\]

\[
\frac{\Delta RGDP}{RGDP} = -1 \cdot \frac{\Delta P}{P}
\]

\[P = CPI = \text{Cons. Price Index}\]
• \( AD \) is a rectangular hyperbola
• Unit price elasticity

Formula

\[ P \times RGDP = Y \]
The price elasticity of aggregate demand (see text)

Zero wealth and substitution effects.

Keynes
- Ch 10
- $e = 0$
- Price inelastic

Monetarist
- Ch 6
- Ch 11, 12, 13
- $e = -1.0$
- Unitary price elastic