

Unit 4  
**Marx and  
 Aggregate  
 Demand and  
 Aggregate  
 Supply**

**Lesson 2**  
 Krugman, Modules 17 - 19 pp.  
 172 - 198

1

---

---

---

---

---

---

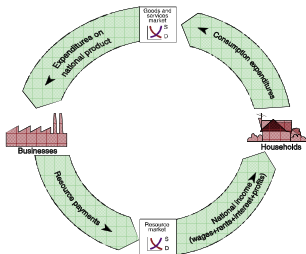
---

---

### Smith's Circular Flow Diagram

The circular-flow diagram presents a visual model of the economy.

- First, the **resource market** (*bottom loop*) coordinates the actions of businesses demanding resources and households supplying them in exchange for income.
- Second, the **goods & services market** (*top loop*) coordinates the demand (*consumption, investment, government purchases, and net-exports*) for and supply of domestic production (*GDP*).
- According to Say's Law, All Income would eventually become Consumption.




---

---

---

---


---

---

---

---

### Classical Economics



**$Y = C$**

JB Say

---

---

---

---

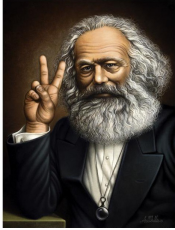
---

---

---

---

**Marxist Economics**



**$Y = C + S$**

**Karl Marx**

---

---

---

---

---

---

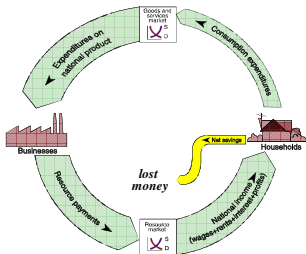
---

---

**Marx's Circular Flow Diagram**

The circular-flow diagram presents a visual model of the economy and Marx's theory of the causation of business cycles.

- First, the **resource market (bottom loop)** coordinates the actions of businesses demanding resources and households supplying them in exchange for income.
- Second, the **goods & services market (top loop)** coordinates the demand (consumption, investment, government purchases, and net-exports) for and supply of domestic production (*GDP*).
- **Excessive saving creates postponed consumption or 'lost money' which causes economic fluctuations.**




---

---

---

---

---

---

---

---




---

---

---

---

---

---

---

---

## Business Cycles

- Marx says the economy fluctuates.
  - **Recessions**: periods of falling incomes, deflation, and rising unemployment
  - **Troughs/Depressions**: severe recessions (50 year technology cycles)
  - **Recovery**: periods of rising income, increasing employment, and growing efficiency
  - **Peaks**: periods of high employment and high inflation (hyperinflation)
- These economic fluctuations are called **Business Cycles**.

---

---

---

---

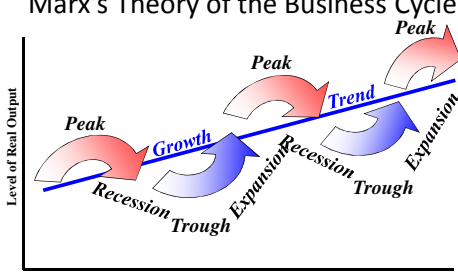
---

---

---

---

### Marx's Theory of the Business Cycle



Level of Real Output

Time

- Twin Problems of the Business Cycle
  - Unemployment
  - Inflation

---

---

---

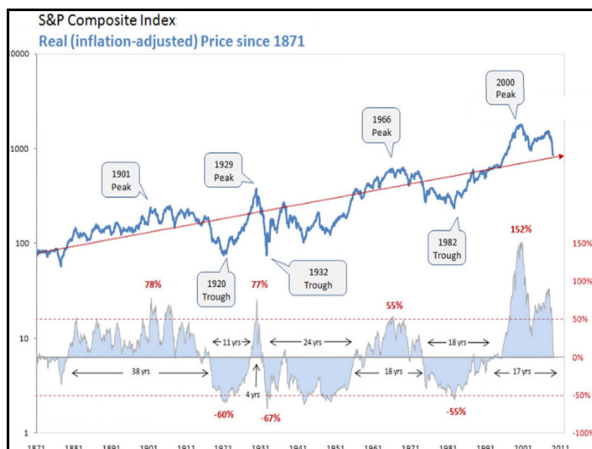
---

---

---

---

---



---

---

---

---

---

---

---

---



---

---

---

---


---

---

---

---

Classical Economics



Joseph Schumpeter

***"In the long run, all Free Markets are efficient; they are self-correcting and self-adjusting."***

---

---

---

---


---

---

---


---

Classical Economics



Joseph Schumpeter

**Three Key Markets Coordinate the Circular Flow**



---

---

---

---

---

---

---

---

### Schumpeter and Classical Theory

- Most economists accept Marx’s theory of economic cycles.
- Schumpeter used the **aggregate demand and aggregate supply model** to explain fluctuations.
- Schumpeter’s model reinforces classical economic belief in the free market’s self-correcting mechanism.




---

---

---

---

---

---

---

---

### Three Key Markets Coordinate the Circular Flow of Income

- **Goods and Services Market:**
  - Market where businesses *supply goods & services* in exchange for revenue. Households, investors, governments, and foreigners *demand goods*.
- **Resource Market:**
  - Market where business firms *demand resources* and pay *costs* households *supply labor* and other resources in exchange for *income*.
- **Money Market:**
  - Coordinates the actions of borrowers (investors) and lenders (savers).




---

---

---

---

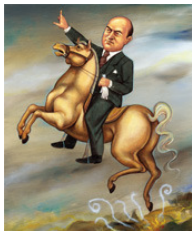
---

---

---

---

### Schumpeter’s Response



Joseph Schumpeter

$$Y = C + S$$

$$S = I$$

$$Y = C + I$$

---

---

---

---

---

---

---

---

### Schumpeter's Circular Flow Diagram

Schumpeter creates a visual model of the economy coordinated by the four key markets:

- First, the **resource market** (bottom loop) coordinates the actions of businesses demanding resources and households supplying them in exchange for income.
- Second, the **goods & services market** (top loop) coordinates the demand (consumption, investment, government purchases, and net-exports) for and supply of domestic production (GDP).
- Third, the **money market** (lower center) brings the net saving of households plus the net inflow of foreign capital into balance with the borrowing of businesses and governments.

The diagram illustrates the circular flow of income and products between Businesses and Households. 
 

- Top Loop (Goods & Services Market):** Households provide 'Consumption Expenditures' to Businesses, which supply 'Output of Goods and Services' to Households.
- Bottom Loop (Resource Market):** Households supply 'Household Savings' to Businesses, which provide 'Resources' to Households.
- Center (Money Market):** Households provide 'Net Savings' to the market, while Businesses provide 'Borrowing' to the market.

---

---

---

---

---

---

---

---

### Aggregate Demand Curve

- The quantities of *domestically produced* goods & services that purchasers are willing to buy at different price levels .
- AD is an inverse relationship between the amount of goods & services demanded and the price level.

The graph shows the Aggregate Demand (AD) curve, which is downward-sloping. The vertical axis is labeled 'Price level' and the horizontal axis is labeled 'G<sub>goods & S<sub>services</sub></sub> (real GDP)'. Two points are marked on the curve: one at price level  $P_1$  and quantity  $Y_1$ , and another at a lower price level  $P_2$  and a higher quantity  $Y_2$ . A red arrow points from the first point to the second, indicating that a reduction in the price level leads to an increase in the quantity of goods and services demanded.

---

---

---

---

---

---

---

---

### Why Does the Aggregate Demand Curve Slope Downward?

- **The Wealth Effect**  
A lower price level will make people believe they are wealthier and encourage consumption.
- **The Foreign Purchases Effect**  
A lower price level will make domestically produced goods less expensive compared to foreign goods.
- **The Interest Rate Effect**  
A lower rate of inflation will make the interest rate look lower causing more purchases.

---

---

---

---

---

---

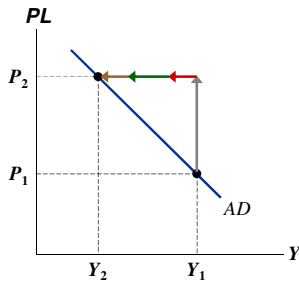
---

---

### The Slope of the AD Curve: Summary

An increase in  $PL$  reduces the quantity of goods & services demanded because:

- the wealth effect ( $C$  falls)
- the interest-rate effect ( $I$  falls)
- the exchange-rate effect ( $X_n$  falls)




---

---

---

---

---

---

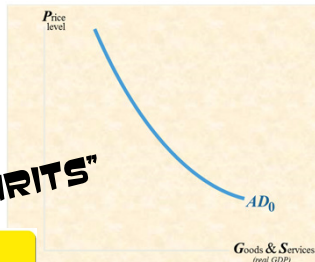
---

---

### Factors that Shift Aggregate Demand

- n Taxes or Government Spending\*
- n Real Wealth.
- n Expectations about future prices
- n Debt of Consumers.

**"ANIMAL SPIRITS"**




---

---

---

---

---

---

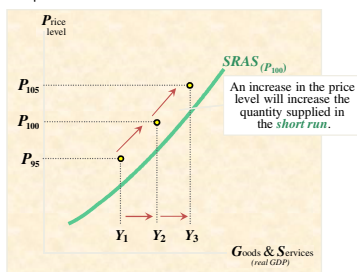
---

---

### Short-Run Aggregate Supply Curve

$SRAS$  indicates the quantities of goods & services that domestic firms will supply in response to the price level.

- $SRAS$  curve slopes upward to the right.
- The upward slope reflects the fact that in the short run an increase in the price level will improve the profitability of firms and they will respond with an expansion in output.




---

---

---

---

---

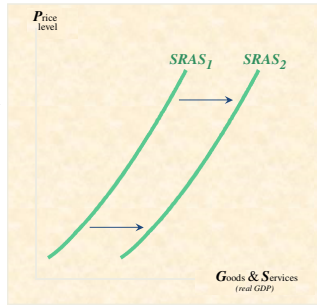
---

---

---

### Shifts in Short Run Aggregate Supply

- n Costs such as wages, rent, and interest.
- n Unexpected supply shocks such as a change in weather or world price of an important resource.
- n Taxes or Government Spending related to business and investment




---

---

---

---

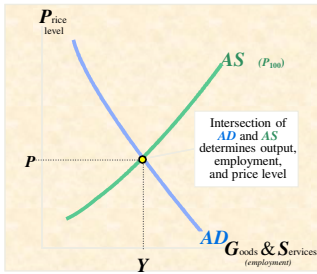
---

---

---

---

### Aggregate Supply and Aggregate Demand



- Short-run equilibrium in the goods & services market occurs at the price level ( $P$ ) where  $AD$  and  $AS$  intersect.
- If the **price were lower than  $P$** , general **excess demand** in the goods & services markets would push prices upward.
- Conversely, if the **price level were higher than  $P$** , **excess supply** would result in falling prices.

---

---

---

---

---

---

---

---

### Aggregate Supply of Goods & Services

When considering the **Aggregate Supply curve** it is important to distinguish between the **short-run** and the **long-run**.

- n **Short-run:**  
-- businesses are only able to adjust production by adding more labor to fixed factory resources.
- n **Long-run:**  
-- changes in the ability to produce, a shift in the Production Possibilities Frontier through Technology, Trade, or Resources.

---

---

---

---

---

---

---

---

### Long-Run Aggregate Supply Curve

- **LRAS** indicates the long run relationship between the price level and quantity of output.
- **LRAS** curve is vertical. A higher price level does not change the limits imposed by an economy's resource base, trade, or level of technology.
- **LRAS** is the economy's production possibilities frontier.

---

---

---

---

---

---

---

---

### Shifts in Long Run Aggregate Supply

- Trade.
- Investment and Technology which results in increased productivity.
- More or less resources such as land and labor.

- Such factors as an improvement in technology will expand the economy's potential output and shift the **LRAS** to the right (note that **SRAS** will also shift to the right).
- Such factors as a reduction in resource prices, favorable weather, or a **temporary** decrease in the world price of an important imported resource would shift **SRAS** to the right (note that **LRAS** will remain constant).

---

---

---

---

---

---

---

---

### Changes in Real Interest Rates and Resource Prices Over the Business Cycle

- When aggregate output is less than the economy's full employment potential ( $Y_F$ ), weak demand for investment leads to lower real interest rates, while slack employment in resource markets will place downward pressure on wages and other resource prices ( $P_r$ ).
- Conversely, when output exceeds  $Y_F$ , strong demand for capital goods and tight labor market conditions will result in rising real interest rates and resource prices ( $P_r$ ).

---

---

---

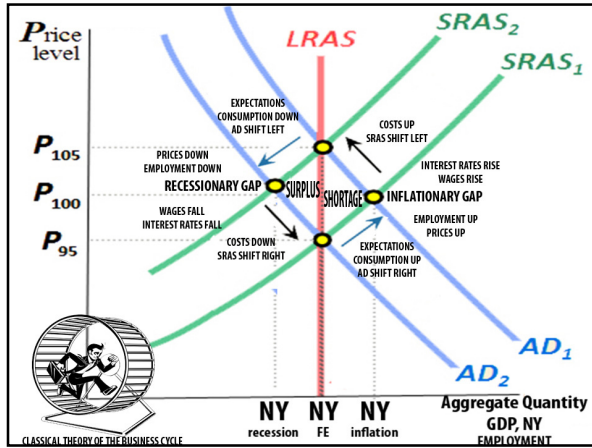
---

---

---

---

---



---

---

---

---

---

---

---

---