Slide 1

The Quantity Theory of Money
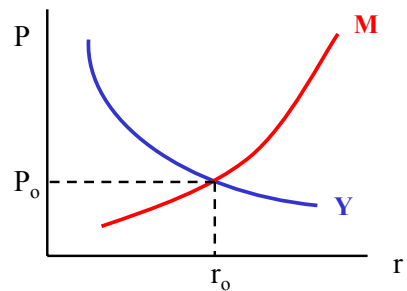
$$MV = PY$$

Slide 2

The Scenario

- The Money supply is doubled on Christmas Eve.
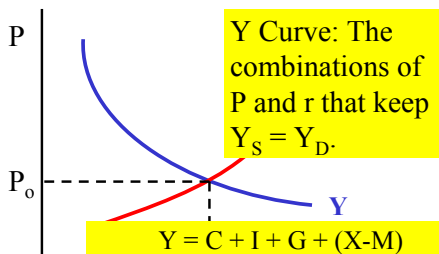- The auctioneer has the job of putting the money market and the goods market back in equilibrium

Slide 3

The Scenario

- The Money supply is doubled on Christmas Eve.
- The auctioneer has the job of putting the mon   equi

Money Supply = Money Demand
$Y = C + I + G + (X-M)$

Slide 4

The Y and M Curves

P

P_o

M

Y

r_o

r

Slide 5

The Y and M Curves

P

Y Curve: The combinations of P and r that keep $Y_S = Y_D$.

P_o

Y

$Y = C + I + G + (X-M)$

Slide 6

The Y and M Curves

P

Y Curve: The combinations of P and r that keep $Y_S = Y_D$.

P_o

M

Y

r_o
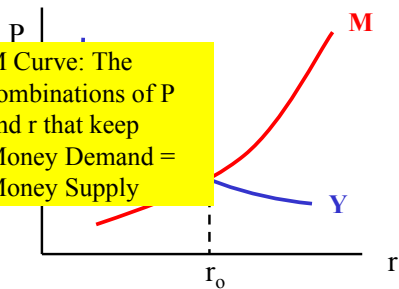
r
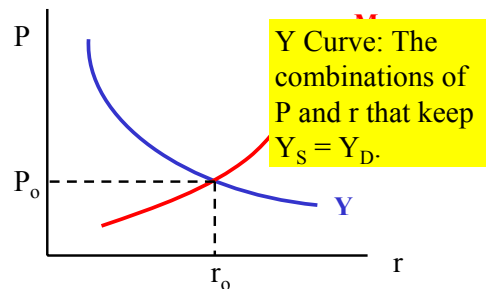
The Y and M Curves

M Curve: The combinations of P and r that keep Money Demand = Money Supply

The Quantity Theory of Money

The Solution

The Quantity Theory of Money
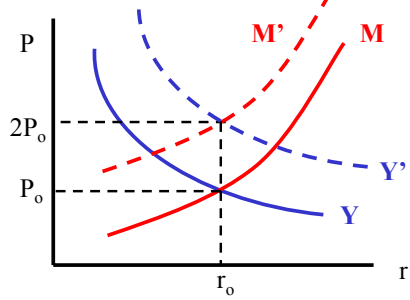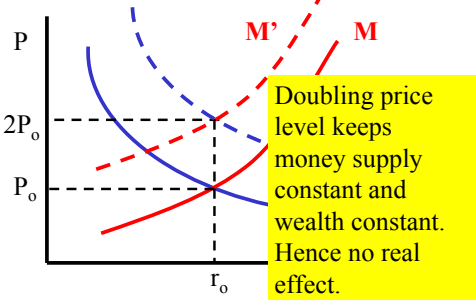
The Solution

Doubling price level keeps money supply constant and wealth constant. Hence no real effect.
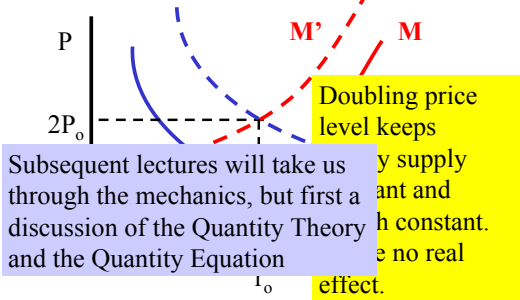
The Quantity Theory of Money

The Solution

Doubling price level keeps money supply constant and wealth constant. no real effect.

Subsequent lectures will take us through the mechanics, but first a discussion of the Quantity Theory and the Quantity Equation

The Quantity Theory of Money

The Quantity Equation

$$M_t^S V_t = P_t Y_t$$

The Quantity Theory of Money

Velocity

$$M_t^S V_t = P_t Y_t$$

• Speed with which money turns over.

The Quantity Theory of Money

Velocity

$$M_t^S V_t = P_t Y_t$$

- Speed with which money turns over.
- Irving Fisher

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A Little Manipulation

$$\longrightarrow M_t^S V_t = P_t Y_t$$

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A Little Manipulation

$$M_t^S V_t = P_t Y_t$$

$$\longrightarrow M_{t-1}^S V_{t-1} = P_{t-1} Y_{t-1}$$

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A Little Manipulation

$$M_t^S V_t = P_t Y_t$$

$$\longrightarrow M_{t-1}^S V_{t-1} = P_{t-1} Y_{t-1}$$

$$M_t^S = M_{t-1}^S + \Delta M$$

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The Quantity Equation

$$(1 + \frac{\Delta M}{M})(1 + \frac{\Delta V}{V}) = (1 + \frac{\Delta P}{P})(1 + \frac{\Delta Y}{Y})$$

$$\frac{\Delta P}{P} \cong \frac{\Delta M}{M} - \frac{\Delta Y}{Y} + \frac{\Delta V}{V}$$

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From the Quantity Equation to the Quantity Theory

- The Quantity Equation is a tautology

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From the Quantity Equation to the Quantity Theory

- The Quantity Equation is a tautology

$$V = \frac{PY}{M}$$

- But what about V? Here, we get to the Quantity Theory

From the Quantity Equation to the Quantity Theory

- The Quantity Equation is a tautology

$$V = \frac{PY}{M}$$

$$\frac{\Delta V}{V} = 0$$

- But what about V? Here, Quantity Theory

From the Quantity Equation to the Quantity Theory

$$\frac{\Delta P}{P} \cong \frac{\Delta M}{M} - \frac{\Delta Y}{Y} + \frac{\Delta V}{V}$$

$$\frac{\Delta P}{P} \cong \frac{\Delta M}{M} - \frac{\Delta Y}{Y}$$

Are We Done Yet?

Are We Done Yet?

- Evidence
- Qualifications
- Manipulation
- Application

End