Our Task

- We have talked about
  - Money Supply
  - Money Demand
    - The demand for real money balances

Assumptions

- Assume
  - The only form of money is cash.
  - All assets and liabilities are denominated in real terms.

Santa Claus

- Sneaks into the Bureau of Printing and Engraving, steals enough un-circulated bills to double the money supply.
- Gives everyone enough new cash to double their money holdings

The Next Morning

- You are the auctioneer
  - Modeled after Leon Walras
The Christmas Eve Caper

The Next Morning

• You are the auctioneer
  – Modeled after Leon Walras
  – You set $P$, the overall price level
  and $r$, the interest rate.

The Goods Market

$Y_S = AK^a L^{1-a}$

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

$Y_D > Y_S$

Money Market

\[ M^D_R < \frac{M^S_N}{P} \]

• While money demand is up, the supply effect dominates.

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• Raise $P$

\[ m^d_{i,j} = \xi \frac{1 + r_N}{r_N} c_{i,j} \]

• Raise $P$.

• Solutions:
  – Raise $P$
  – Raise $r$

Money Supply = Money Demand

\[ Y = C + I + G + (X-M) \]
Money Market

- While money demand is up, the supply effect dominates.
  \[ M_R^D < \frac{M_S}{P} \]
- Raise \( P \).
- Lower \( r \)

\[ m_{i,t} = \frac{\xi}{r_N} c_{i,t} \]

The Solution

- Double \( P \)
- Keep \( r \) unchanged

The Goods Market

No change in wealth, ergo no change in consumption.

\[ Y_D = Y_S \]

\[ Y_D = C + I + G + (X-M) \]

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Conclusions

- Memo to Auctioneer: take the rest of the day off.
- This is not the first Christmas present that didn’t work out the way you expected.

The Quantity Theory of Money

- The price level changes in proportion to the money supply.
- Changes in the money supply has no further effect. *Money is neutral.*

David Hume

End

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