Purchasing Power Parity

Inflation

- The Mexican Monetary Authority Increases the supply of Pesos by 50%.
- Mexican Prices must rise by 50%
  - T-shirts at 75 Pesos
  - CDs at 225 Pesos
- The Exchange rate must go to $1 = 15 Pesos.

Inflation

- The Mexican Monetary Authority Increases the supply of Pesos by 50%.
- Mexican P
  - T-shirts a
  - CDs at 2
- The Excha Pesos.

Before the inflation, a dollar bought just as much in Mexico as in the US. So too after the inflation.

Two Versions of PPP

- A dollar buys just as here as it does abroad.
  - If US (or Mexican) prices adjust, the exchange rate adjusts to keep purchasing power constant in the two countries.
- If a dollar buys (say) 10% more in Mexico, and Mexico has inflation, exchange rates will adjust to keep that ratio.

And Neither Works

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- If a dollar buys (say) 10% more in Mexico, and Mexico has inflation, exchange rates will adjust to keep that ratio.

Wrong, wrong, wrong!

How many proofs does it take?

- A dollar does not buy as much in NYC as it does in Cleveland.
- We have seen months when exchange rates move by 15-20%. Clearly not consistent with Purchasing Power Parity.
- The Big Mac index is on point.

The Big Mac Index of Living Cost (April 1998)

Country	Price in Local Currency	In Dollars at 1998 Exchange Rate	Percent Higher or Lower than American Price (1995 in paren)
United States	$2.56	$2.56	0%(0%)
Australia	A$2.65	$1.78	-32%(-22%)
Japan	¥280	$2.185	-19%(+100%)
Sweden	24.0 Kroner	$3.00	+17%(+53%)
Thailand	52 Baht	$1.30	-49%(-16%)
Germany	4.95 DM	$2.69	5%(50%)

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Two Cases where PPP Works

- Traded Goods
  - Goods that can easily be transported
  - The price of a barrel of oil in Osaka Harbor must be the same as a barrel of oil in New York Harbor.

$$\frac{Price\ of\ Crude\ Oil\ in\ Yen}{Price\ of\ Crude\ Oil\ in\ Dollars} = \frac{Yen}{Dollar}$$

Two Cases where PPP Works

- Traded Goods
  - ... be transported
  - ... of oil in Osaka Harbor ... barrel of oil in New York

1 $= 120¥

Oil = $20/bbl

Oil = 2400¥/bbl

$$\frac{P\ldots\ in\ Yen}{Price\ of\ Crude\ Oil\ in\ Dollars} = \frac{Yen}{Dollar}$$

Two Cases where PPP Works

- Traded Goods
- Hyperinflation.
  - If Mexico started increasing prices by 100% per week, then the exchange rate would rise by 100% per week.

Testing your Knowledge of Traded Goods

- Gold sells for $400 an ounce in San Francisco and €400 in Paris. A good loaf of French Bread sells for $3 in San Francisco and €2 in Paris. What is the exchange rate between dollars and Euros?

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1€=1$

Summary

- Exchange Rates Fluctuate
  - Much of the fluctuation is due to changes in supply and demand.

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- Exchange Rates Fluctuate
  - Much of the fluctuation is due to changes in supply and demand.
  - In hyperinflations, differences in the inflation rate will predict exchange rate movements.

End