Inflation and Globalization

By
Blair Cavagrotti
& Casey Lilenfeld

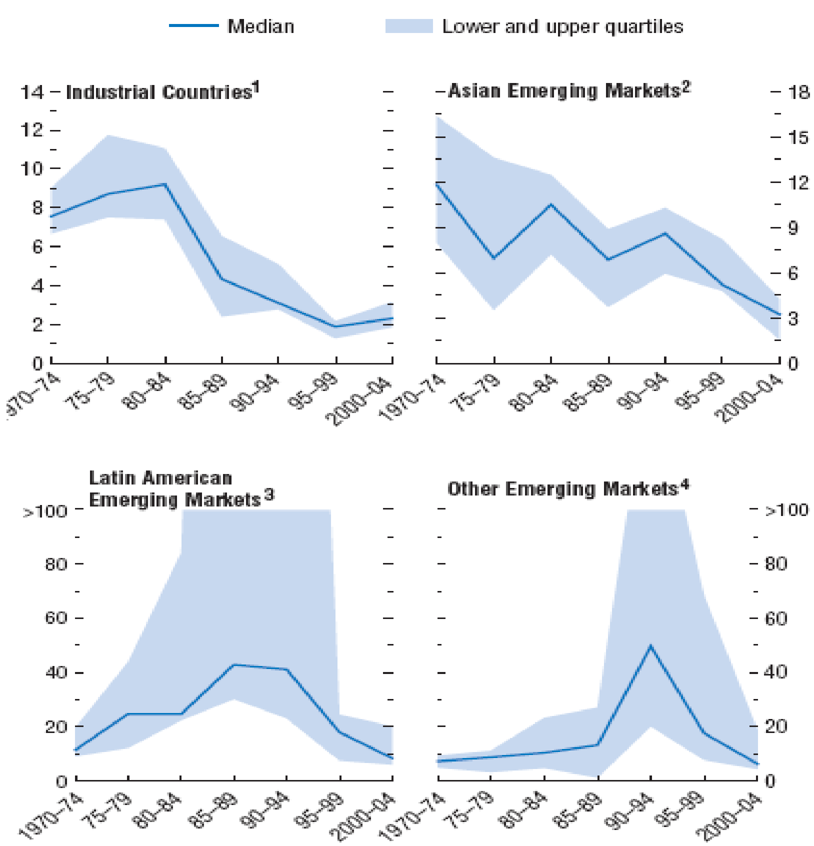
Recent Inflation Developments

- Since the oil price shocks of the 1970's and the 1980's, inflation has been on a downward trend.
- Domestic inflation levels have been converging to low levels worldwide.
- Inflation volatility has declined as well.

Figure 3.1. Inflation

(Distribution of five-year averages of year-on-year CPI inflation across countries)

Inflation declined significantly during the 1980s and 1990s in industrial countries and, with a lag, major emerging markets.



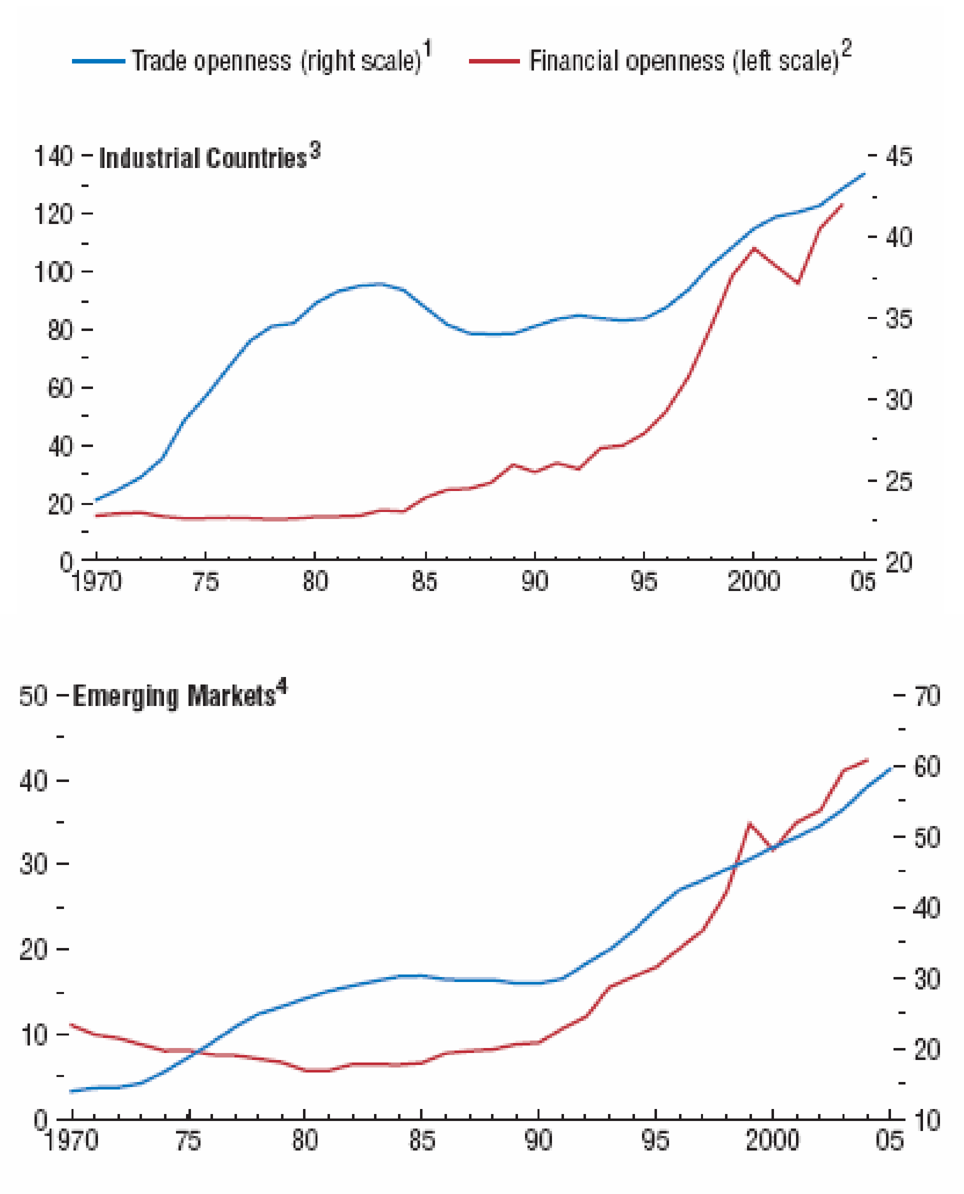
Why is inflation better behaved?

- More credible monetary policy
  - Central banks learned from the errors of the 1970’s and stabilized their policies.
  - Central banks have increased their focus on inflation control as a result of institutional reforms like central bank independence and preventative measures.
- Lower inflation environment
  - Consistent and predictable low inflation has made inflation more stable because the anticipation of low inflation makes firms re-price their goods less often.

Another explanation: Globalization!

- What is globalization?
  - Helbing et al. (2006): The acceleration in the pace of growth of international trade in goods, services, and financial assets relative to the rate of growth in domestic trade.
  - At the global level, this encompasses the dramatic growth in key emerging markets like China and India.
  - International trade has increased since the 1970s.
  - Ball (2006): In addition, financial integration has increased at an unprecedented rate, however, theories of how globalization might affect inflation have to do with trade, not financial integration.
- As economies have opened to trade, competition and flexibility have created favorable conditions for global inflation to decline and output to increase.

Trade and Financial Openness



In the early 1990s, international trade and financial openness increased for both industrial and emerging market economies, reflecting an acceleration in globalization.

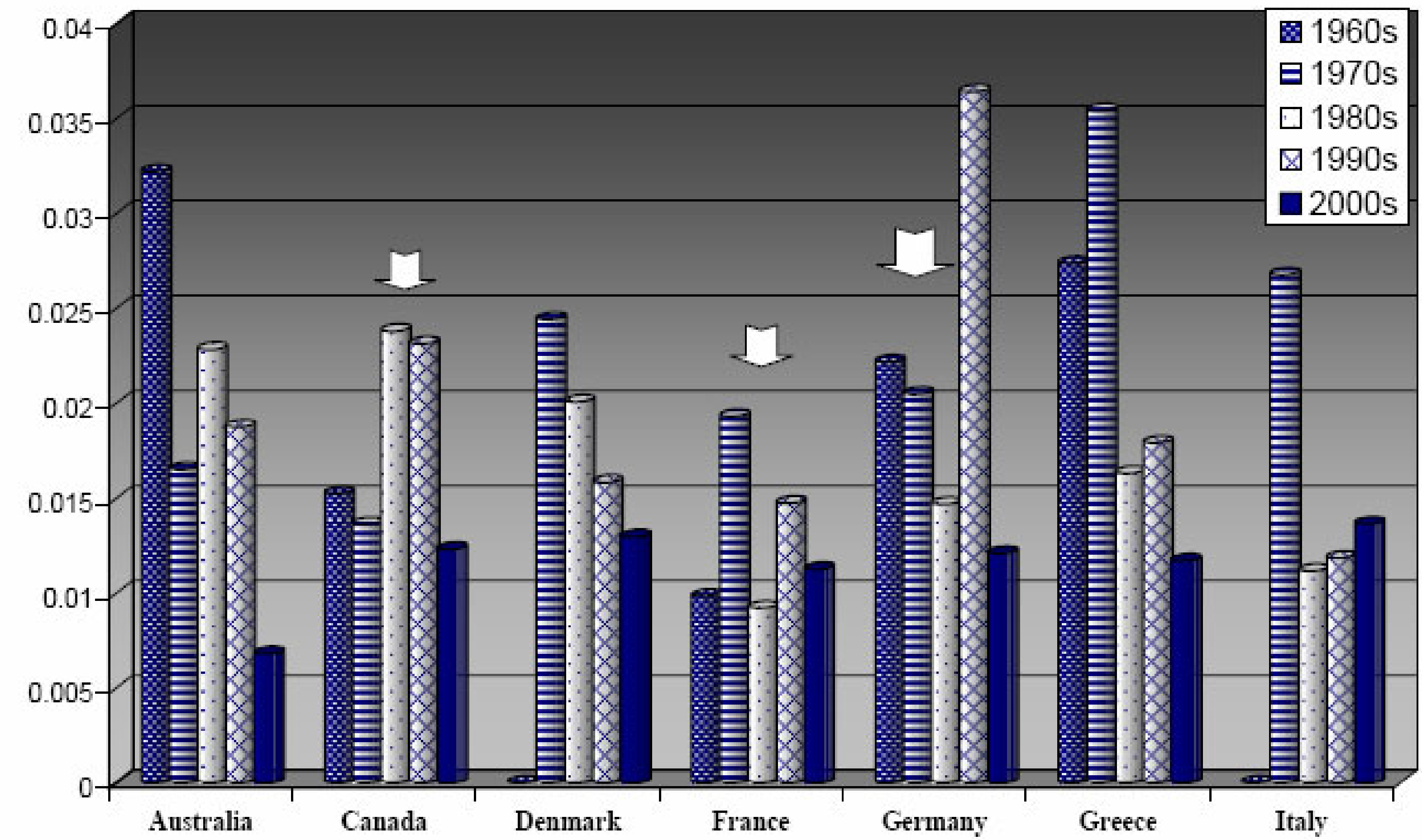
In what ways can globalization affect the economy?

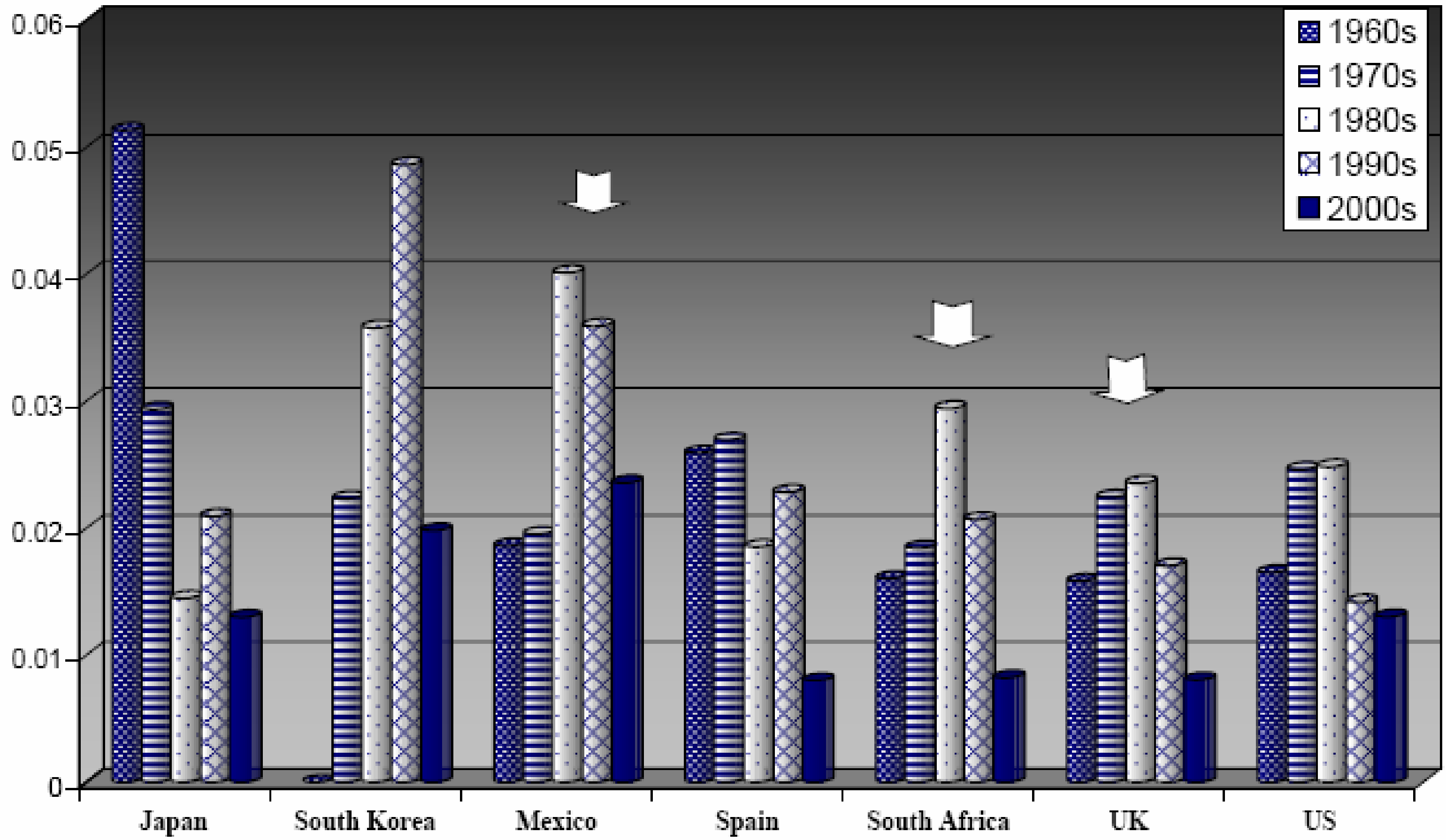
- Through policy
  - Central banks’ inflation targets are lower because globalization means they can’t use inflation to stimulate short-term domestic demand.
- Through trade
  - Prices of goods have fallen due to international competition and increased substitutability.
  - Markups by domestic producers are moderated by competition from abroad.
- Through growth
  - Globalization leads to competitive innovation, which leads to an increase in productivity and overall lower prices.
- Relationship between domestic demand and domestic price levels is weakened due to trade because of foreign sources of demand – which domestic policy makers do not control.

Rogoff (2006)

- Globalization can run in reverse and hurt markets.
- Central banks have less impact on medium and long-term domestic real-interest rates, but large CBs like the Fed hold influence over other CBs that stabilize their currencies against the dollar.
- Lower output volatility across countries, but some had lower volatility in the 1960’s compared to 1990’s; 2000’s show a recent decline, but globalization and/or deeper financial markets are not the whole reason since they were prevalent in the 1960’s.

Output Volatility (annual data)





Note: Output volatility is measured as the st. dev. of the change in natural log of real GDP for the given decade. Data ranges from 1960 to 2005 except S. Korea (1970), Italy (1970) and Denmark (1970). Arrows indicate countries with lower output volatility in the 60s compared to the 90s.
Source of data: IMF-IFS; annual data

Rogoff (2006)

- Argues that globalization steepens the Phillips Curve.
- Increased trade, deregulation and opening of economies creates greater competition which makes prices & wages more flexible. Prices become *more* sensitive to changes in unemployment.
- Implications for monetary policy: Countries are kept to inflation goals because gains from temporary expansionary policy are diminished and the probability of higher inflation is increased.
  - Central banks have less incentive to create unexpected inflation, so their promises to keep inflation low are more credible.

Rogoff (2006)

- Should international variables be used when deciding national monetary policy rules?
  - Exchange Rate: Unless there is a very large shock, they are too disconnected from output and inflation figures to give clear signals about the economy.
  - Terms of Trade: Compelling because of its consistency with output volatility past the 1980's. Could be useful for strict inflation targeting rules to give cushioning in case of shocks, but not necessary for more rules that incorporate inflation *and* output already.
- Globalization has benefited economies as central banks have established credibility. But . . .
- Can central banks' monetary policies remain stable and credible in the face of a slowdown or reversal of globalization?

O’Neill et al. (2006)*

- Inflation has been low because of stronger monetary policy, but globalization is a major part of inflation trends.
- China’s miraculous growth and development has acted as a major deflationary force through lower import prices abroad, reduced wage growth and higher productivity.
- China’s average GDP growth rate of 9.4% is remarkable but unsustainable – can anyone of the other BRICs or N11 “do a China”?
  - India is the only country with enough growth potential to fill China’s shoes.

*O’ Neill, Jim et al., “Globalisation and Disinflation – Can Anyone Else ‘Do A China’?,” Goldman Sachs Global Economics Paper No: 147, October 5, 2006. http://www2.goldmansachs.com/insight/research/reports/docs/gepaper.pdf

Helbing et al. (2006)

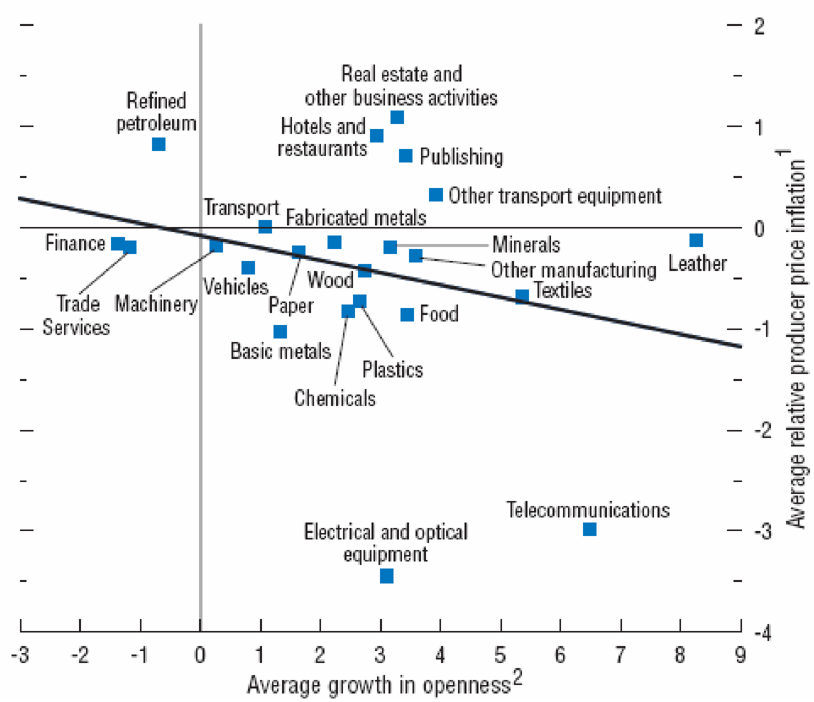
- How globalization could affect inflation: aggregate
  - Reduces sensitivity of prices to the domestic business cycle. This means that there is less inflation brought about by traditional goals of low unemployment.
  - Trade integration lowers import prices, but since this is a nominal issue, we can only expect to take advantage of this in the short term.
- How globalization could affect inflation: sectors
  - Competition from abroad limits the ability of domestic firms to mark up prices
  - Ineffective firms are forced by foreign competition to exit the market so average cost of production decreases
- Does globalization have these effects?

Helbing et al. - Findings

- Openness contributed significantly to the reduction of sensitivity of prices to the business cycle.
- Globalization may lower import prices, but the benefits of this are only temporary
- Across sectors, more open sectors have experienced relatively lower inflation

Figure 3.11. Producer Price Inflation and Openness
(1987–2003; annual percent change)

Changes in trade openness and relative producer prices are negatively correlated.



Borio & Filardo (2006)

- Globe-centric perspective of inflation is gaining importance
  - Goods from different countries are close substitutes
  - Labor and capital are more mobile across borders
- This means inflation may be less sensitive to domestic factors (flattening of the Phillips Curve) and more sensitive to global factors. This means that domestic action taken to decrease unemployment does not put as much upward pressure on inflation.

Borio & Filardo - Findings

- Declining sensitivity of domestic inflation to domestic output gaps
- Increasing importance of global “economic slack” in domestic inflation
- Implications for future monetary policy
  - Should monitor global factors
  - Domestic monetary policy may be less effective because of the flatter Phillips Curve.

With some reservations, all of these articles agree that globalization has had at least some impact on current inflation trends.

Is this a valid conclusion?

An Alternate Perspective (Ball, 2006)*

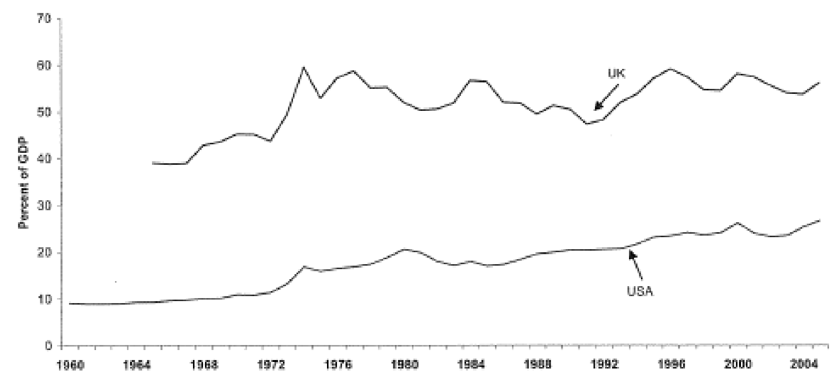
- Globalization has NOT been especially dramatic
- Globalization has NOT reduced the long-run level of inflation
- Globalization has NOT affected the structure of the Phillips Curve
- Globalization has NOT contributed substantial negative shocks to the inflation process

*Ball, Laurence M., "Has Globalization Changed Inflation?", National Bureau of Economic Research Working Paper 12687, November 2006, http://www.nber.org/papers/w12687.

The fallacy of accelerating globalization

- International trade has not risen dramatically.
- U.S. trade rose faster in the 1990s than in the 1980s, but it rose even faster in the 1970s, a decade characterized by high inflation.
- Financial integration has risen dramatically, but there is no coherent theory on how this might directly influence inflation

Total Trade for USA and UK



Total trade = Non-oil imports and exports (Source: IMF)

The fallacy of the steeper Phillips Curve

- As we’ve seen, Rogoff argues that the Phillips Curve should become steeper with globalization
- This is inconsistent with many other findings, including Helbing et al., and Borio & Filardo, which show that the Phillips Curve has gotten flatter.

The fallacy of the steeper Phillips Curve

- A steeper Phillips Curve would mean the opposite of what we see in data across the world: *higher* inflation.
  - A steeper slope implies that lower unemployment creates increased production, which puts upward pressure on wages and costs of productions which then causes price levels to *rise*, not decline. Inflation goes up instead of down if it is more sensitive to unemployment when we know inflation levels are declining.

The fallacy of how globalization has flattened the Phillips Curve

- Argument: Globalization increases competition, makes prices less responsive to output changes.
  - Counterargument #1: Lower trend inflation has reduced the frequency of nominal price adjustments (prices are sticky, but they fluctuate less often and exhibit less variability)
  - Counterargument #2: Increased credibility of central banks has solidified inflation expectations, stabilizing actual inflation.
  - Counterargument #3: Ball estimates a Phillips Curve equation that accounts for the level of trade; finds a small, and possibly insignificant, effect on PC.

The fallacy of China (aka the fallacy of relative and import prices)

- Many economists believe that globalization has put at least some downward pressure on inflation through trade with countries like China and India, who have relatively lower costs of production.
- This may sound reasonable, but it is not necessarily fact.

Why is this a fallacy?

- *Relative* prices are affected by trade, whereas inflation affects *Nominal* prices.
- China is seen as a deflationary force, but this is not correct – China's exports are cheap *relative* to other goods, so domestic prices are actually rising *relative* to China.
  - So how could this cause deflation?

Is there *any* way relative prices could cause inflation?

- Theoretically no, but practically yes.
- OPEC affected inflation in the 1970’s because of large year-to-year changes in relative prices.
  - Increases in trade since the 1980’s have had a smooth expansion, so changes in relative prices have not impacted inflation.

What does the Fed conclude?

- “Globalization has not materially affected the ability of the Federal Reserve to influence financial conditions in the United States, nor has it led to significant changes in the process which determines the U.S. inflation rate. However, effective monetary policy making now requires taking into account a diverse set of global influences, many of which are not yet fully understood.” – Ben Bernanke, March 2, 2007

Conclusions

- The most significant factor in lower inflation trends since the mid-1970’s/1980’s is more credible monetary policy.
  – Central Banks learned a valuable lesson about the dangers of high inflation.
  – Globalization has been possible at current levels because of policy stability.

Conclusions

- Globalization *may* have had *some* impact on inflation, but probably not.
  - Financial globalization has accelerated, but there is no definitive proof of it influencing inflation.
  - The data is inadequate to say anything with assurance about the effect of globalization on inflation. Even with more data, it seems unlikely on theoretical and practical grounds that globalization would have a significant or minor impact on inflation.