Food Prices and Inflation

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Why Should The Fed Care About Food Prices?

- **Agriculture is a significant part of the economy**
  - E.g., in our district

- **Food prices and inflation**
  - Food prices make up a significant share (~15%) of consumers’ budgets
  - In an arithmetic sense, food price increases have raised overall inflation recently:
    - Last 12 months: 0.2%
    - Last 60 months: 0.1%
Do Food Prices Really Matter For Inflation?

- **In the long run, NO!**
  - Overall inflation is the responsibility of the Federal Reserve
  - Monetary policy can achieve goals for price stability regardless of what happens to the *relative price* of food
  - Or any other relative price

- **In the short run, YES!**
  - The Fed has little ability to adjust policy quickly enough to offset year-to-year movements in the prices of food, energy, or other commodities
  - Monetary policy works with a lag
  - In order to keep prices stable, large increases in the *relative price* of one good, might imply price decreases for many goods
  - Easiest adjustment may entail a one time increase in price level
Nominal and Real Corn Prices

Nominal Price of Corn
($/Bushel)

Real Corn Price in terms of Minutes Worked
($/Bushel corn price deflated by AHE multiplied by 60)
Fed Policy And Relative Commodity Prices

- Did the Fed make food and energy prices rise?

- Dollar depreciation implies a small effect on dollar prices of commodities

- Lower real short-term interest rates decrease the costs of holding inventories
  - Could allow “speculators” to take more commodities off market
  - Could raise relative price of commodities

- But,
  - Inventories not particularly high
  - Price increases for commodities without futures markets
Inflation and Inflation Expectations

- A one-time increase in the aggregate price level may not be a huge concern
  - A transitory increase in measured inflation may not affect expectations about the future

- Possible danger: Transitory inflation may become embedded in the public’s expectations of future inflation
  - That would be self-fulfilling

- Fed credibility is key
  - Public needs to have confidence that Fed will not allow a one-time price-level increase to turn into a persistent increase in average inflation
Inflation: Core and Total

PCE Price Index
(12-month percent change)
Do Fed Economists Eat?

- **Tool:** Core inflation
  - Strip out volatile components
  - Simplest: Remove food and energy
  - Can be improved on: Median, trimmed mean, Kalman filtering

- **Goal:** Low and stable overall inflation
  - Judge us over several years

- Core inflation provides a decent/rough indication of underlying trends in overall inflation
  - May roughly capture inflation expectations

- Recent core inflation provides a decent/rough forecast of future overall inflation
  - Better than recent overall inflation
A Danger Of Focusing On Core Inflation

- What if food price changes not only have a higher variance, but also a higher mean?
  - Then leaving them out of a core measure creates bias

- Over the last 40 years, not much difference in means

- Over the last 5 years, fairly significant difference in means

- Is it reasonable to think that relative food prices will rise significantly over the next five years?
Can We Forecast Relative Food Prices?

- **Pure time series analysis of prices**
  - Messrs Dickey and Fuller suggest that relative food prices are non-stationary
  - Some predictive power in lags of relative price changes
  - Relatively little predictive power from interest rates
  - Very preliminary forecast: Relative food price increasing 0.2% per year over next several years

- **What about supply and demand?**
  - Joe?
  - Dermot?