Speculation and volatile food prices: An overview of the debate and research

By

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Overview of ongoing discussion
Food price trends (index, 2005 = 100)

Since 2003, food prices have been rising.

Since 2007, food prices are volatile.

Speculation?
Debate since 2008

- 2008: increased speculation (by indexfunds) since 2003 pushed up prices

- 2010: increased speculation (by indexfunds) increased volatility of prices
Claims made (but to be proven!)

- More speculation by index funds on agricultural commodities futures markets
  - Higher prices on futures markets
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
  - Higher prices on futures markets
  - Higher food prices in developing countries
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
  - Higher prices on futures markets
    - Higher food prices in developing countries
      - Increase in hunger
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
  - Higher prices on futures markets
  - Higher food prices in developing countries
  - Increase in hunger
  - Position limits needed
Claims made (and to be proven!)

- Speculation (by index funds) on agricultural commodities futures markets
- Higher prices on futures markets
- Higher food prices in developing countries
- Increase in hunger
- Position limits needed
Debate is not whether speculation leads to bubbles on agricultural commodities futures markets...

Etienne, Irwin & Garcia (2012) Bubbles in Food Commodity Markets: Four Decades of Evidence

- “for the twelve agricultural commodities examined, all have experienced multiple bubbles between 1970 and 2011”
- “it is evident that bubbles existed long before CITs arrived and the process of commodity market financialization started”
...but whether index funds have led to higher cash prices on markets

Overview studies all conclude this cannot be proven:

- Irwin and Sanders (2011)
- Meijerink & Shutes (2012)
- Glauben, Prehn, Pies & Will (2013)
Scientific evidence does not support this claim (1)

Irwin and Sanders (2011)
Index Funds, Financialization, and Commodity Futures Markets

- fail to find a direct empirical link between index trading and commodity futures price movements
Scientific evidence does not support this claim (2)

Shutes & Meijerink (2012)
Literature review of 41 studies

“...cannot be established that speculation by index funds has structurally increased prices of agricultural commodities“:

- A few studies conclude that a large influx of speculative capital can lead to short term price fluctuations of a few hours to a few days.
Scientific evidence does not support this claim (3)

**Glauben, Prehn, Pies & Will (2013)**

**Literature review of 35 studies (10 scientific articles and 25 general) published between 2010 and 2012**

“Financial speculation is not the cause of high food prices”:

- Vast majority of research papers did not confirm the concerns about the impacts of speculation on agricultural commodities markets
- Financial speculation may even contribute to making the agricultural markets function better
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
- Higher prices on futures markets
  - Higher food prices in developing countries
- Increase in hunger
- Position limits needed

Global prices not translated 1 to 1 to developing countries
Difference between global and local prices

- International wheat price (2007-2010)

- Wheat price in Mzuzu, Malawi (2007-2010)
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
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  - Increase in hunger
- Position limits needed

No evidence there was across the board increase in hunger.
FAO modified figures after improving methodology

Source: FAO
Food prices and hunger (FAO, 2011)
Claims made and to be proven

- Speculation by index funds on agricultural commodities futures markets
- Higher prices on futures markets
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- Increase in hunger
  - Position limits needed

US Court Ruling 2012: “first show that position limits are necessary!”
Other cases of speculation
When does speculation lead to higher prices?

- Speculation impacts on the real (cash) commodity markets:
  
  1. If investors buy up large quantities of an agricultural commodity and store these to influence price
     - Amajaro cocoa (2010: taking delivery of 7% of the world’s physical supply)
     - Banks investing in storage of metals (Goldman Sachs)
  
  2. Herd behaviour
     - Rice market: speculation by governments and traders
Speculation by governments in rice (Headey, 2008)

- Nigeria scraps 100% tariffs and imports 0.5 million metric tons of Thai rice.
- India, Vietnam, and Cambodia place full bans on exports and new Thai government discusses possibility of ban.
- Jan-Mar: Saudi imports from Thailand rise by nearly 90% after India’s ban.
- Egypt restricts exports.
- Vietnam and India place partial restrictions on exports.
- Drought causes Iran to order 0.8 million metric tons of Thai rice.
- Jan-Apr: Philippines buys normal annual quota in just 4 months, including government-to-government deal with Vietnam.
- Japan allowed to re-export rice stocks, dollar strengthens, oil and other crop prices fall.
- Cambodia removes ban.
- Egypt announces re-export of rice from Sep.
- India lifts export ban on some higher quality varieties.
- Strong demand from energy exporters keeps rice prices 25–30% above 2007 levels.
New evidence: macro-economic factors & uncertainty
Macro-economic factors


- Commodity prices are driven by multiple forces and characterized by very long-term trends and shorter-run cycles of varying durations
- Importance of understanding structural breaks
Increased uncertainty (Joëts et al., 2014)

- Period of high uncertainty (proxy indicator of macro-economic variables)
Source of uncertainty

- **Financial crisis** an important source of macroeconomic uncertainty (Joëts et al., 2014)

- World has become more **integrated**: shocks are felt all over the world

- Globalization leads to **informational frictions** regarding the supply, demand, and inventory of commodities. Aggregating information is challenging (Cheng & Xiong 2013)