SHORT-TERM ENERGY PRICES: WHAT DRIVERS MATTER MOST?

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**BROAD COMMODITY PRICES SINCE 2000**

*Graph showing commodity prices from 2000 to 2010, including oil, copper, and wheat.*
A (GROSSLY OVERSIMPLIFIED) FRAMEWORK ...

- Two candidate explanations:
  - “Fundamentals”
    - Trend price movements appear broadly interpretable through lens of fundamental market developments...
    - ...but, extreme volatility is, admittedly, tough to explain.
  - “Speculation”
    - We think that financial market developments can help explain some of this excess volatility...
    - ...but, we have yet to articulate a specific mechanism by which “speculative activity” drives commodity prices.

- This distinction, though rudimentary, is nonetheless relevant for current policy proposals.
...BUT, IN REALITY, LINE BETWEEN IS **BLURRED**...

- High degree of uncertainty in commodity markets
  - **Model uncertainty**
    - Consumption dynamics appear to differ:
      - (a.) across countries at a given point in time; and
      - (b.) over time for a given country.
    - Deepening of financial markets have arguably made commodity markets more forward-looking
  - **Parameter uncertainty**
    - Income and price elasticities notoriously hard to pin down
  - **Uncertainty regarding true state of the market**
    - Lack of data transparency / Data mismeasurement
    - No clear anchoring of long run expectations
...WE NEED MORE RESEARCH AND BETTER DATA TO HELP MAKE THE LINE MORE DISTINCT.

- More theoretical guidance → Better econometric identification
  - Three areas, in particular, seem fruitful:
    - A coherent explanation of cross-country consumption patterns
    - Interaction of physical storage market with global economy
    - Investment cycles and the supply response

- How can we anchor market expectations of long-run oil prices?
  - Transparent communication regarding long-run oil prices
  - High frequency, publically available data on cost of production and major investment projects

- Is this a tall order?
  - Yes, it is. But, that shouldn’t stop us.
MY OWN (MODEST) STEP IN THIS DIRECTION:

- **Arseneau (2010)**
  - **Goal**: Make sense of heterogeneity in oil consumption over business cycle in a panel dataset of 35 countries.
  - **Main Findings**: Systematic differences emerge in oil consumption between developed and emerging market economies
    - Not only in growth rates (which, of course, is well-known) but also in business cycle dynamics.
    - Test some simple hypotheses to explain this finding.

- **Why Should We Care?**
  - **Policy Implications**: Channels by which fundamentals affect global energy prices may change over time.
  - **Theoretical Implications**: Need to be thinking about models that allow shocks propagation at a more “micro-oriented” level.
  - **Empirical Implications**: Pushing the models in this direction would likely help econometric identification of elasticity parameters.
CONCLUSION

- Understanding volatility is critical for policymakers
- Our current level of understanding is insufficient
  - Addressing this short-coming may be difficult, but we need to try
    - We need more research, both theoretical and empirical;
    - more and better data; and
    - open communication regarding a long-run market view in order to help market participants form expectations.
- Better Understanding → Less Uncertainty → Lower Volatility