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Globalization Commentaries

First published by the *Triple Crisis Blog*
October 19, 2011

# Spotlight G20: More fodder for the food price debates: ethanol, speculation drove prices

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As the G20 takes its November meetings into the belly of the eurozone crisis, its food security agenda drifts toward irrelevance. Or worse. Early promises to address commodity speculation and market volatility have given way to tepid recommendations from G20 agricultural ministers in June and last month's underwhelming communiqué from its Washington meeting on development, with its one snappy paragraph on food security issues. Now that finance ministers on their gilded steeds have turned and fled from the dragons of commodity speculation, the G20 is unlikely to slay any of the monsters threatening global food security – biofuels expansion, land grabs, speculation, price volatility, low public investment.

Fortunately, new research keeps coming, and it should inform the debate. The latest is from a group of researchers at New England Complex Systems Institute (NECSI). As their name would indicate, these are modelers, and their paper, "The Food Crises: A quantitative model of food prices including speculators and ethanol conversion," offers evidence that the underlying cause of rising food prices over the last decade is primarily the US corn ethanol program, while the cause of the two recent price spikes is speculation.

The model results pretty much speak for themselves. The authors – Lagi, Bar-Yam, Bertrand, and Bar-Yam – sought a model that could explain recent food price movements, and they found one. In the process, they disprove notions that rising prices were caused by weather, rising demand in China and India, and other fundamentals of supply and demand. Minor effects, says their modeling, compared to conversion of US corn to ethanol, which explains the vast majority of food price increases (not just corn) due to fundamentals. They then add to this relatively smooth upward pressure on prices their model of commodity market speculation based on observed trends, herd investing, lags in market corrections, and transmission from futures to spot markets. Notably, they fit their model not to futures price movements but to food prices themselves. Here is their summary graph and explanation:

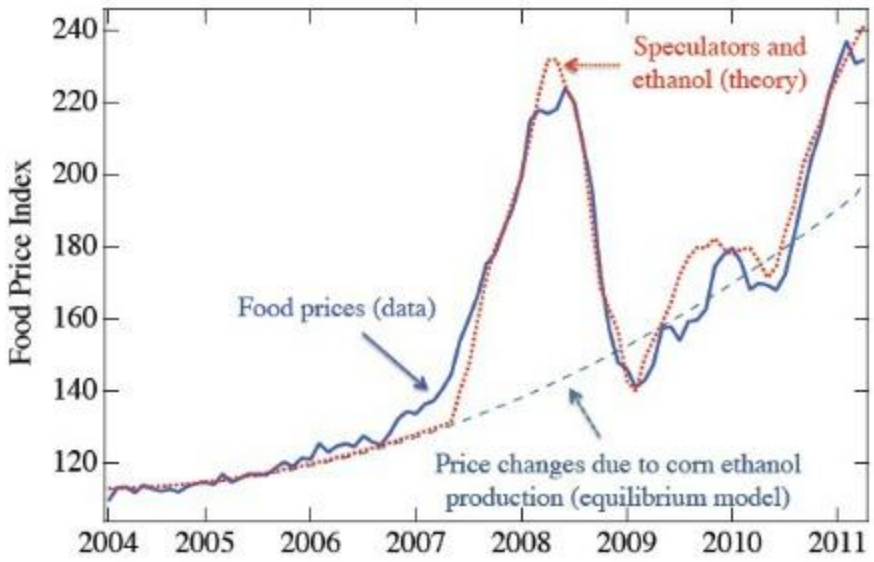


*FIG. 1: Food prices and model simulations – The FAO Food Price Index (blue solid line) [1], the ethanol supply and demand model (blue dashed line), where dominant supply shocks are due to the conversion of corn to ethanol so that price changes are proportional to ethanol production (see Appendix C) and the results of the speculator and ethanol model (red dotted line), that adds speculator trend following and switching among investment markets, including commodities,equities and bonds (see Appendices D and E).*

The authors explain the influence of volatile futures markets on spot prices by taking the novel step of talking to granaries about their price-setting practices. According to the authors, traders report setting spot prices using futures prices as references. Ghosh, Heintz and Pollin, in a new paper, explain these connections in more detail: "If the expectation is that prices will increase in the future, suppliers will only be willing to sell on the spot market at a higher price than they would in the absence of such expectations. This is because traders in the physical commodity could always hold onto their stocks and sell them at some point in the future."

In any case, the NECSI model of speculative behavior fits the actual price data to a remarkable degree. They even explain the more recent run-up in food prices, which, unlike the 2007-8 spike, happened despite a rise in inventories generated by supply responses to the earlier spike. Their explanation: speculation, which kept prices above equilibrium and prevented the poor from buying up those inventories.

Their conclusions are quite clear: "Both causes of price increase, speculative investment and ethanol conversion, are promoted by recent regulatory changes – deregulation of the commodity markets, and policies promoting the conversion of corn to ethanol. Rapid action is needed to reduce the impacts of the price increases on global hunger."

The underlying model certainly deserves closer scrutiny, but this is no marginal study by fringe researchers with an agenda. It was partly funded by the U.S. Army, which was apparently interested in

understanding the causes of food price rises and their relationship to popular unrest in the Middle East and North Africa. The authors list their reviewers: Peter Timmer, Jeffrey Fuhrer, Richard Cooper, and Thomas Schelling.

Hopefully, the G20 is still listening. So too the U.N.'s High Level Task Force on the Global Food Security Crisis, which commissioned its own expert study (see posts here and here). The danger is that the U.N. will allow the G20 to set its agenda, in effect reducing the range of issues and policy responses on the table.

The mounting evidence implicates two key drivers of high prices and volatility, biofuels expansion and speculation. A new study from IFPRI confirms this, as does UNCTAD's Trade and Development Report 2011. As the NECSI researchers point out, both biofuels and speculation are influenced directly by regulations. That's good news, because it's harder to address some of the other drivers, such as the weather and the move to meat-based diets in emerging economies. By comparison, these are simple (if complex politically) and the U.S. government could go a long way to solving them unilaterally: end ethanol incentives and implement strong Dodd-Frank-mandated regulations on commodity speculation. Throw in a Financial Transactions Tax, which still has some supporters in the G20 and which new research shows would most impact high-frequency traders, and we could be making important progress on food security.

G20 – Are you listening?