

## Commodity market instability and development: Issues and policies<sup>\*</sup>

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The purpose of this paper is to review the various aspects of commodity market instability and development, with the purpose to identify whether research has dealt with some of the pressing issues relating to the topic during the past years, to identify appropriate policy measures to deal with food price spikes in particular, and to identify promising areas for further research.



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.../... Market instability or volatility normally refers to variations of market prices from period to period. As such it is an ex-post concept, in the sense that everyone can observe the market variations. However, what matters for both market participants as well as policy makers are not the market price variations per se, but their unpredictability, and the risks they create. Uncertainty of the variable  $x$ , when looked at from some period before its realization, is basically a summary measure of the unpredictable elements in the process determining  $x$ , that are likely to occur between the time of the prediction and the time of realization of the variable  $x$ . Risk, in turn is generated by uncertainty. In other words risk is generated by actions whose outcomes are subject to unpredictability.

The principal concern of market participants and policy makers alike is not large ex-post variations in observed prices per se, but large shifts in the degree of unpredictability or uncertainty of subsequent prices. Such large shifts normally also cause large changes in observed market prices and are associated with what has been termed “excess volatility”, a rather elusive concept referring to variations of prices outside what maybe inferred or predicted on the basis of expectations of rational efficient markets.

The detrimental effects of uncertainty or unpredictability on both private agents, as well as governments are not hard to understand, and have been the object of both discussion as well as research for a long time. For instance, Keynes argued that commodity price fluctuations led to unnecessary waste of resources, and, by creating fluctuations in export earnings, had a detrimental effect on investment in new productive capacity, and tended to perpetuate a cycle of dependence on commodities, what we may call in modern growth terminology a “commodity development trap”.

That unpredictability is the main problem in agricultural production is one of the oldest, but apparently forgotten or not appreciated, issues in agricultural economics. In fact one of the

earliest classic works in agricultural economics considered exactly the issue of agricultural price unpredictability and the benefits of establishing forward prices for producers. By establishing forward prices for agricultural producers, one basically eliminates one of the most troublesome and potentially damaging sources of income unpredictability, and makes producers able to plan better their activities.

While general commodity market instability and unpredictability is crucial for commodity exporting countries, and this is where the commodity dependence literature has focused for most of the past 40 years, food commodity dependence, especially by LDCs, LIFDCs, and NFIDCs<sup>1</sup> came to the fore with the first world food crisis of 1973-74, and recently with the food crisis of 2007-8. Food market instability and especially unpredictability matters a lot for food security for countries and households that are net staple food buyers.

The reactions to the recent price boom, suggest that policy reactions to the food price surge have been prompt, with governments in many developing countries initiating a number of short-run measures, such as reductions in import tariffs and export restrictions, in order to harness the increase in food prices and to protect consumers and vulnerable population groups. Other countries have resorted to food inventory management in order to stabilize domestic prices. A range of interventions have also been implemented to mitigate the adverse impacts on vulnerable households, such as targeted subsidized food sales. Most of these measures were government led, manifesting a retreat from earlier market oriented strategies for food security.

1. LIFDCs (Low Income Food Deficit Countries) are a FAO classification. The latest list of May 2012 includes 62 countries. The list of LDCs (Least Developed Countries) is one used by the United Nations (UN) and as of 2012 includes 49 countries. Almost all LDCs are also included in the LIFDC list. The list of NFIDCs (Net Food Importing Developing Countries) is a World Trade Organization (WTO) group, which as of 2012 includes all 49 LDCs and another 31 higher income developing countries, for a total of 80 countries.

The major issue relevant to the impact of high international food prices, and/or unpredictable food price spikes on food security, is the impact on poor rural and urban net staple food buying households. This impact in turn depends on two factors. First, it depends on the share of staple foods in total consumption expenditures. Secondly, it depends on the degree to which international food prices are “transmitted” to the local markets.

On the first issue empirical research has shown that in most low-income countries, people living on less than \$1.25 per day are largely net buyers of staple foods, and the share of these foods in total expenditures is very high, usually larger than 50 percent. On the second issue it has been documented that policies of various countries have been insulating domestic from international markets, thus exacerbating price variations in the residual international market. Based on such assessment, studies have shown that the potential increases in poverty and hunger due to the world food price spikes is significant.

In terms of asymmetric price behavior and imperfect markets, it has been shown that spreads between domestic consumer prices and respective international commodity prices, as well as spreads between domestic wholesale prices and international prices increased dramatically in the 25 year period before 1997, because of the asymmetric response of domestic consumer prices to movements in world prices. In all major consumer markets, decreases in world commodity prices have been systematically much less transmitted than increases to domestic consumer prices. This asymmetric response, which has been attributed to trade restrictions and processing costs, appears rather to be largely caused by the behavior of international trading companies.

A well known possible consequence of large real income shocks for individual households is the fall into poverty traps. The idea is that a short term shock may induce a household

to lose a substantial amount of its productive assets, thus, in the presence of credit constraints, not allowing it to produce adequate income in subsequent periods, and hence falling in a state of chronic poverty.

Increases in market prices of basic purchased commodities, such as wheat, maize, or rice, would have to be substantial to induce a large income shock. To accommodate large consumer food price rises households employ a variety of “consumption smoothing” strategies, or reduce the amount of consumption of the staple. As reducing or selling assets is one such strategy, and a shock may induce the sale of productive, rather than unproductive assets, the possibility is very real that a commodity price shock can induce poverty traps. No evidence, however, of any such occurrence has as yet been provided in the literature in light of the recent or earlier food crises.

There are basically two ways in which individual countries can manage their domestic food markets in the face of excessive international market volatility. One involves trade actions, and the other involves public stockholding. If countries or other agents can be assured their commodity supplies through trade, then they would need to carry lower levels of security stocks. Hence trade can be an important substitute for carrying costly physical inventories. In the recent as well as previous food crises, there were three major trade facilitation related problems that caused governments to examine carrying larger security stocks. The first concerned unexpected and uncoordinated export bans by key exporters, which tend to increase international prices. The second was the unavailability of import financing for several lower income food importing countries, and the third was the uncertainty about international contract enforcement in times of rising prices. The paper discusses a variety of existing measures, and proposes some new ones to deal with these basic problems. Some of the proposed approaches involve public intervention, national or inter-

national, and others are market based, and are based on the idea of managing price volatility, rather than trying to control or prevent it.

It appears that there are several ways to manage (rather than prevent) market volatility and spikes for the benefit of low-income food importing countries, and there have been several proposals along these lines. The paper reviews all these proposals and makes some new ones. The ones that seem most cost effective and least distorting of international markets are those that are market based. Among those, utilizing existing systems of commodity risk management, such as futures and options, is the easiest, and could be enhanced by the support of new exchanges in developing countries as well as technical assistance on how to exploit the various instruments available.

A new proposal for a new system of a Global Financial Food Reserve (GFFR) is made, in the form of a fund to finance long positions or food commodities in organized exchanges. Such a fund could constitute a dormant virtual physical reserve that could generate physical and financial resources in times of a spike, so as to benefit highly negatively affected developing countries. In other words the GFFR would be a market based global safety net. Apart from the GFFR, the proposal for a Food Import Financing Facility (FIFF) is also deemed cost effective and an appropriate mechanism to ensure the con-

tinuous flow of food imports in times of a spike.

It was seen that there are ways to guarantee the performance of international food import contracts, through the promotion of standardized international food contracts in existing international commodity exchanges or the linking of existing exchanges and their clearing houses, through an International Grain Clearing Arrangement (IGCA). These could be explored further with the collaboration of existing exchanges.

The final set of measures that could be taken involve global safety nets. The GFFR proposed in the paper is one form of such a global safety net, and a physical emergency reserve to smooth out flows of food aid is another. However, others in the form of permanent funds or technical assistance to help needy countries maintain their local food safety nets can also be envisioned.

In summary it appears that there are quite a few cost effective and non-distorting measures and options to lower the probability of food price spikes, and help food importing low-income developing countries to manage the attendant risks. Given that food security is of paramount concern to all countries, especially those that are at low levels of food intake, it appears that the international community has a major role to play in ensuring global food security in a world of growing uncertainty.



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