HOW TO FIGHT AGAINST AGRICULTURAL PRICE VOLATILITY?

On Saturday 19 February the World Bank's president Robert Zoellick declared, "We need to be sensitive and have a fingertip feel on what is happening in terms of food prices and its potential effect on social instability". The price spike that occurred between June and December pushed 44 million individuals below the extreme poverty line worldwide. What is of most concern to politicians and other interested parties is not so much upward pressure on prices but the spread of volatility. Wherein lies the solution?

According to figures released in February, “the World Bank’s food price index rose by 15 percent between October 2010 and January 2011 and is only 3 percent below its June 2008 peak.” Of primary concern are grains which along with fats and oils, coffee, and sugar account for the bulk of tradable agricultural commodities in terms value as well as volume.

Structural imbalance and market trends

A macroeconomic lens is required to fully comprehend the current instability of the agricultural market. Independent analyst Iana Dreyer has highlighted the role of exchange rate fluctuations by focusing attention on the dramatic price spike that occurred in 1972-73 following the collapse of the Bretton Woods system and the decision to float the US dollar.

Current uncertainty is additionally being driven by climate-related variables and harvests were poor in such places as Canada, Russia, and Kazakhstan. In the case of the latter two countries, this led to restrictions on exports from the beginning of last August which had the effect of pushing up global prices. More bad news arrived in the autumn following flooding in Pakistan and Australia along with disappointing harvests in both Argentina and Brazil.

The trend upwards in global commodities prices defies a simple explanation based on the gap that exists between supply and demand. Price inflation has tended to proceed exponentially as noted by Associate Matthew Beckwith of McKinsey (Singapore) through his exploration of the factors at play in the international market for rice. Less than 10 percent of global production is sold on the open market and if domestic production drops by say 2 percent, then 2 percent of the export market will be curtailed to make up the shortfall. The result is an exponential impact on global markets. The disequilibrium between supply and demand gives rise to volatility and has the potential to destabilize markets worldwide.

But supply does not depend solely on production. The tenuous nature of the link between production and actual supply was demonstrated through the pioneering work of Nobel Prize recipient Amartya Sen when he was able to demonstrate the dynamics at play in the distribution of food shortages across India. When one state possessed significant stocks its neighbor might be experiencing widespread famine and in the years that followed independence the evolving political climate allowed for the formulation of improved policies of allocation that dramatically reduced the impact of famine in the country.

Structural factors have unquestionably contributed to the unpredictability of recent years calling into question the foundations on which the current system rests. ~~Studies conducted by the United States Department of Agriculture~~ have identified salient short- and long-term factors for development. Matthew Beckwith draws upon these to explain the structural tension between supply and demand in the agricultural sector. He is not alone in his conclusions as the observations of Nobel Prize winner Paul Krugman make clear. Beckwith makes special mention of shrinking supplies of arable land. The 1970s and 1980s witnessed rapid growth in the amount of land given over to cultivation worldwide as countries as diverse as Saudi Arabia and Mexico made strides toward self-sufficiency but success has been hampered by soil erosion and lack of adequate water supplies. The contribution of Brazil, and its continuing redeployment of land for agricultural purposes, is resulting in diminishing returns as the worldwide population continues to rise and economic growth transforms the dietary demands of large swathes of the globe. Indeed, the UN Food and Agriculture Organization (FAO) has estimated that production will have to rise by 70 percent over the next 30 years to satisfy demand according to currently observed trends.

A Senior Research Fellow at the International Food Policy Research Institute (IFPRI, Washington, DC) and a professor of economics at University of Pau (France), Antoine Bouët highlights the pressure exerted on global food prices by the rapid development of the biofuel sector. Most of the demand has centered on corn and sugar cane as well as various vegetable oils (soy, colza, and sunflower) and the IFPRI has estimated that around 30 percent of growth in prices over the period 2006-2008 is attributable to the biofuel sector. The World Bank and IMF have produced figures that are even higher which makes it all the more remarkable that the American Congress, under pressure from the powerful farm lobby and the states of the Midwest, has estimated the impact at only 3 percent.

Jean-Christophe Bureau, professor of economics at Agro ParisTech, goes further making note of the current conditions within a wider context to produce evidence for a connection between the price of oil and the market for grain. Speculators are all too aware that rising oil prices induce producers to arbitrate in favor of biodiesel.

Market organization or speculation?

Because of the disequilibrium operating at the structural a well as environmental level of the current market the role of speculation has elicited strong reactions. The European Commission was able to present several perspectives on the issue before settling on its current position on 2 February recognizing “a strong correlation between positions on derivatives markets and spot prices” for commodities.

When the market is in a phase of expansion market actors either fear or hope for yet more expansion. As more aggressive behavior becomes the norm the buying and selling of shares takes on added urgency and hoarding takes place. Meanwhile, those with something to sell do so grudgingly. The variety of behavior on display—greedy, prudent, or simply wait-and-see—adds fuel to the fire of price hikes. Indeed, it would be misleading to describe the behavior on display as purely “speculative”. While there is indeed no shortage of traders waiting patiently on the sidelines to exploit any chaos in the market to increase their bottom line they rub shoulders with government representatives who have lost their confidence in the ability of traditional markets to satisfy requirements.

There are in fact two types of markets that have come under scrutiny by politicians and other interested parties. The European Commission has focused on the existence of over-the-counter markets where contracts are negotiated between a buyer and seller privately and without the aid of an intermediary. The problem is the opacity of this arrangement. Transactions elude any regulatory oversight or watchdog initiatives. No long term commitments are made and investors in these markets are for the most part looking for immediate gain and return on their investment.

The second problematic area is the derivatives market which presents its own set of issues. We can return to a question that arose during the financial crisis of 2007-2008 over their role in exacerbating volatility. In theory, these markets exist to provide a cushion against price instability, and a guarantee of security to investors. In reality, within a context of rising uncertainty they create more instability as investors take advantage of the chaos by essentially placing bets on the upward or downward fluctuations of the market. The issue has figured at the top of the policy agenda at numerous ministerial discussions across the EU. To distinguish between legitimate hedging transactions and pure speculation the EU envisages implementing a system of daily reporting on the positions taken by various market actors, along the lines of the US Commodity Futures Trading Commission.

Better oversight alone however will not solve the current dilemma. The nature of the transactions taking place in agricultural markets, along with their sheer volume, has created a short-term logic that encourages speculation. Can the markets be restored to sanity?

Regulatory options

Our first step toward a better understanding of the current dilemma requires imagining the question from the angle of market intelligence and its availability to the primary actors. The quality of available information could theoretically limit volatility as becomes clear if we look at instances where lack of balance between supply and demand has not led to penury. Antoine Bouët notes that greater transparency would encourage suppliers to make investments in a given commodity without waiting for upward pressure on prices. Nevertheless, he warns that “for countries these stocks have become strategic stakes. National authorities have an interest in gaining intelligence on foreign reserves while keeping their own concealed. The sole path forward is an agreement to simultaneously make the information available to all so that each national authority would disclose reserve levels while gaining intelligence on those of their peers. On paper this is possible but political reality suggests otherwise." France has already made proposals to G20 partners for the creation of a universal database to facilitate exchange and observers have highlighted the usefulness of the idea ...and its impracticality.

The regulatory approach to derivatives markets has rather more potential and could consist of something along the lines of the model adopted in the United States on 15 July 2010 when the Dodd-Frank Act went into effect placing position limits on traders in commodities markets. Unfortunately, provisions of the act have since been called into question by the new conservative Republican majority in Congress. Moreover, the measures would be difficult to extend beyond national frontiers and would introduce complexity that would be hardly imaginable at the global level.

The creation of regional strategic reserves could also serve as a buffer against volatility. In existence since antiquity, this option has nevertheless run up against the potential for politically motivated roadblocks. One proposal rests on the creation of 'virtual reserves' and has been discussed at length by Brian Wright (Berkeley) who nevertheless concludes that this solution alone is insufficient for market stabilization. Nonetheless, the creation of actual physical reserves according to locally prevailing conditions could be of immense benefit to the most vulnerable countries.

Market liberalization, a path forward?

Speculation tends to rear its head in direct relation to whether a market is functioning imperfectly and increased fluidity in the mechanisms of exchange could offer a pertinent response to price volatility. The idea was demonstrated with remarkable clarity by Steve Moody (Brigham Young University) a few years ago through his investigation of distortions in the price of rice. The erection of elevated tariffs in Japan and South Korea retarded the development of export driven rice cultivation in a number of south-east Asian countries depriving them of an important engine for growth.

Antoine Bouët notes the role of taxation and export restrictions which remain outside the remit of the World Trade Organization (WTO) and have been adopted in a number of countries (Argentina, India, Ukraine, Russia) when prices have threatened to spiral out of control. Taxes placed on exports have the effect of reducing domestic prices but create penury at the international level placing upward pressure on global commodities prices. “The effect is dramatic for small net importer countries such as Tunisia, Egypt, Pakistan, or Bangladesh. The WTO should reach a consensus on how to regulate these instruments of commercial policy as they are counter-productive to the spirit of international cooperation.”

Somewhat paradoxically however, he continues, an overly drastic liberalization of the markets could serve to fan the flames of agricultural prices. Immediate suppression of import tariffs, or subsidies that favor export led growth, would be counter-productive and actually serve to heighten demand while reducing supply. The result would be upward pressure on global food prices. Nevertheless, he concludes, a gradual loosening of commercial restrictions would eventually lead to growth in the volume of the global market for agricultural products, creating more stable prices and reducing the harmful effects of volatility.

Expansion of production capacities?

Taking a long view toward development means an acknowledgement of the role of increased production in any future plans. Matthew Beckwith points out the potential of scientific innovation indicating that the next generation GMO technology could hold the key to unlock future development; innovation will probably lead to a better decoupling of food and biofuel production.

Investment remains an open question and Ronald Jaubert (Graduate Institute, Geneva) has a long enough memory to remember the flurry of initiatives launched during the food price spike of 2008 ...few of which ever saw the light of day. Two regions have been identified for their potential to shake up the status quo and the development of cultivable land in sub-Saharan Africa and South America presents a real opportunity. In Western Africa, political will has been backed by financial commitments from state actors as well as foreign investment issuing primarily from the Far East. Some of the world’s largest food firms (Mars and Nestlé) are also backing the initiative as a means to better insulate themselves from volatility. Another encouraging trend is the rise of the market for microcredit which allows local farmers to develop land considered too marginal to be of interest to the multinationals. Indeed, Ronald Jaubert has noted the complementary nature of the two paths toward development as the arrival of more organized competition could encourage the creation of local exchanges that would benefit all producers, large and small.

How far should institutional support for agricultural policies extend? The EU's common agricultural policy (CAP) is regularly criticized for its cost to taxpayers and Antoine Bouët notes the rising ire of experts toward policies designed to support the development of agriculture for ends that have nothing to do with food, in most cases biofuels. An explanation for this skepticism can be found in the price inelasticity that results from the imposition of quantitative targets on production at the expense of other concerns. On one hand, the question over whether to intensify production in some targeted regions has become increasingly salient. Within this context there is a clear tendency for policymakers to favor investments along well established lines such as providing fertilizer and pesticides; granting credit; providing education on new farming techniques; and investment in transport and communications infrastructure. On the other hand, it would be ill-advised to attempt to add subsidies to the policy mix. Moreover, action should proceed at the regional level as in the example of Western Africa where local actors are given a voice and commercial accords have been signed with the EU and at the international level through programs such as Aid for Trade.

The menace of price volatility will continue to exert a powerful disincentive to investors and while it may be possible to envisage a weakening of the dynamic as the market matures the need to create greater efficiency in the instruments of exchange has become increasingly urgent. Speculation is not the only villain but in attacking it we create an environment more favorable to the elimination of market imbalances and the roots from which they grow.

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