

Part B

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Foreign Affairs Ministry

1. Managing Food Price Volatility : Workshop Minutes

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*The aim of this workshop was to present the study “**Managing Food Price Volatility for Food Security and Development**”, produced by GREMA with the support of the Ministry of Foreign and European Affairs, the Ministry of Food, Agriculture and Fishing, the Ministry of the Economy, Industry and Employment, and the Agence Française de Développement, and to discuss this report with experts from different backgrounds (researchers, international organizations, farmers’ organizations, etc.). The workshop was attended by approximately one hundred participants.*

Morning Session

Opening: In his speech, Mr. Thiébaud from the MAEE reminded the audience that this study was produced in the context of the French presidency of the G20, and that fighting price volatility was one of the priorities of the French presidency.

- **Presentation of the Study, by Françoise Gérard, CIRAD**

The presentation of the study made it possible to go over its context, objectives and main conclusions. With the 2008 crisis, operators were suddenly reminded of price instability, which is inherent in agricultural product markets; and current market tensions have sharpened the feeling that instability will only increase in the years to come. Experts now agree that there is a conjunction between two types of instability in agricultural markets, and that these instabilities are of different natures and, accordingly, respond to different remedies:

- Some price instability is caused by the dependency of yields on natural conditions, a characteristic of agricultural production. These fluctuations are attenuated in a global market that is self-regulated by trade, particularly when transfer costs between markets are low. This reasoning is the basis for the negotiations on trade liberalization (WTO).
- However, a second source of price volatility is also at work. It is linked to projection errors by farmers, traders and speculators, which are much more

frequent than for any other type of production precisely because of the multiple hazards affecting production levels and giving considerable importance to information enabling projections in price formation. Habitually, a price rise indicates increased demand and is a signal to producers, who have every interest in investing. However, in the case of agricultural products, a price rise can come solely from a poor harvest. In this case, the increase in production by farmers causes prices to drop, destabilizing the market. The phenomenon is the same with traders and speculators who manage the transfer of goods in time and space. It is found on markets at all levels (local, national, regional, international), and is a characteristic shared with financial and commodities markets. Unlike the first type of fluctuations, they are not attenuated by the size of the market: because of the statistical characteristics of this series (scale invariance), shocks are not diluted, they are cumulative and synchronize themselves!

This second type of instability, generated by projection errors, is responsible for a large proportion of price instability. It is a market failure because the market is no longer able to coordinate individual decisions based on the transmission of an adequate price signal to agents. It justifies direct market intervention. Intervention is, however, not issue-free, and it is important to remember that the liberalization undertaken for a quarter century has been justified by the avoidance of the costs and unwanted effects of public intervention, after a quarter century of intervention with mixed results despite considerable resources.

This is why, beyond theoretical analysis, this study emphasized a precise study of experiments undertaken in different contexts (historical, economic, geographic, institutional) and on different scales (local, national, regional, international) so as to determine the invariances necessary for effective recommendations.

The following principles can be deduced from the study: a combination of instruments must be set up; and the policy followed must be legitimate (and therefore negotiated) and credible (which implies access to considerable expertise and financial resources as well as to institutional capabilities that make it possible to ensure contracts are followed, avoid harmful rent-seeking behaviors, and fight corruption). It is necessary to ensure that each type of actor has the capacity to defend their interests and represent themselves in each consultation body. Undeniably, the process is costly in the short-term, but price stabilization—when it is well done and avoids in particular the rut related to over-production—allows for remarkable progress in the area of food security and poverty alleviation. This progress is, however, progressive and cannot be clearly felt in the short term, which intensifies the difficulties associated with these policies.

When it comes to international bodies, the most important thing is to encourage the poorest countries to set up ambitious agricultural policies that target poverty alleviation. Historical analysis can clarify the decisive role played by large international organizations' public positions in the local definition of economic policy. A shift in

discourse that draws the lessons from the past is necessary. This shift must be accompanied by resources and innovative financing methods.

- **Presentation of the Outcome of the November 29-30 Workshop, by Peter Timmer, Harvard**

The speaker, a professor emeritus from Harvard, is probably one of the best-known experts in the world on this subject. He first emphasized the quality of the analysis by the team and the summary paper, as well as the richness of the discussions during the workshop.

He then underscored the destructive nature of price instability for food security. Price hikes are particularly disadvantageous for consumers while price drops affect producers, making price instability a true hindrance for investment and thus modernization. Above all, it is a major roadblock on the path to growth and poverty alleviation.

To fight price instability, it is important to determine which level of instability is the problem and what type of actors are concerned by it. Another key point is the type of product concerned, its role in consumption, the country's position as importer or exporter, and its unique characteristics. Border instruments, buffer stocks and the regulation of international financial markets are the primary tools available to countries to manage the problem. Setting up these policies is complex and costly in the short term, whereas the benefits appear only over the long term; they must be based on exemplary technical analysis that is continuously updated to reflect changes in the context. On the international level, all negotiations that make it possible to improve market operation and information are useful.

In short, fighting instability requires different forms of action in function of the context, and is a difficult task but **countries must be encouraged to fight instability rather than discouraged from doing so**. It is also useful to distinguish between the general goal of price stabilization and combating emergency situations. The ultimate goal of the first is to minimize the occurrence of the second and lessen the cost of such situations.

Panel of Four Experts from the Academic Sphere:

What are the main sources of price instability? What are the primary reasons for the success or failure of public interventions? What can be done on the international level?

- Philip Abbott is a Professor at Purdue University (USA); he has recently written a comprehensive report on volatility and national stabilization initiatives for the OECD.

During his speech,

- he addressed the causes and consequences of the sharp rise in international commodity prices, notably specifying that the current peak period was longer

than peaks had been in the past, and that it may have been generated by new as well as old factors. He emphasized the importance of stocks in price changes, observing that persistent biofuels demand means that expected carry-out stocks remain low even after several excellent years of agricultural production, leaving markets vulnerable as current weather events occur. If there is a role for speculation it is that positions taken reflect inflationary expectations, for which public market intervention in grain markets are not very relevant; and

- he insisted that national price stabilization initiatives generate instability on the international level, which calls for caution when intervening. Reliance on international trade to stabilize domestic markets, even partially, will require that major exporters as well as large but self-sufficient markets (e.g. China and India) do not close their borders. The isolationist policies not only of exporters but also of importers were an important underlying cause of the price spikes realized in 2008, and are likely to be reinstituted now.
- Andrew Dorward is a Professor at The School of Oriental and African Studies, (University of London) and a specialist on these issues. He addressed several points:
 - The causes and consequences of price instability and the question of the magnitude of the 2008 crisis compared to the 1974 crisis, which depends heavily on the deflators used and the markets examined (period/country/products).
 - The issue of the problems raised by price instability must be placed in a wider context that makes it possible to take into account the current challenges in the area of natural and fossil resource management in response to population growth. Demand-side actions must not be neglected: reducing waste, changes in food habits in regard to meat consumption.
 - The emphasis is too frequently placed on managing the effects of instability but not enough on preventing this instability. To manage the problem, it is necessary to view it as a whole, and to focus more on promoting long-term processes increasing both volumes and stability of supplies and stocks in order to reduce the need for generally more problematic management of price stability.
 - It is important to take into account the specific situations of different types of farmers, and in particular the differentiated effects of policies on net buyers. The institutional dimension and the way that policies are implemented are of crucial importance.
 - Stable, low food prices are important for food security and social peace. Today, however, with the growth of the population and incomes, natural resources are becoming restrained, which implies high prices, in particular for energy and perhaps for food. This must be taken into account when defining economic policy.

- Maximo Torero (IFPRI) is the author of a proposal on managing price volatility when it is excessive. He presented the online platform set up by the IFPRI on this subject, which provides public information that can be used in making decisions.
 - He discussed the existing consensus on the negative impacts of “excessive volatility” for farmers and consumers. That said, the challenge is to define what is meant by excessive volatility.
 - He insisted on the fact that his analysis was international in scope, and that other approaches were necessary on the national level.
 - Stabilization at the national level must nevertheless take into account the dependency between markets and avoid exporting domestic instability to foreign markets.
 - The importance of the non-distorsive nature of the instruments used. The costs involved with the use of each instrument must be carefully assessed along with their impact on excessive volatility. In regard to physical stocks, for example, the definition of the optimal stock size and the need for a transparent trigger mechanism are key points. It is necessary to clearly distinguish between regulatory stocks and strategic emergency reserves.
 - The importance of information on stock levels. This is a major challenge, even on the national level, but it is crucial that this challenge be overcome.
- Kako Nubukpo is a Professor at the University of Togo, and Division Chief at the Office of the Presidency of WAEMU. He had decided to address the subject of price instability and public intervention from the standpoint of cotton, on which he is an acknowledged specialist. In particular, he discussed:
 - The (very high) volatility of cotton prices, which justifies applying price stabilization measures, and its causes (production cost variations cannot explain the high level of volatility), the role of developing countries’ subsidies in price formation, and the links between cotton cropping and cotton growers’ food security.
 - The importance of exchange rates in international competitiveness and the over-valuation of the CFA franc that constitutes a major handicap for agriculture; American subsidies are therefore the only issue behind the problem of African cotton’s competitiveness.
 - The importance of the budget constraints associated with HIPC initiatives, which prevents any ambitious agricultural policies.

Points Raised During the Discussion with the Audience:

- The importance of tackling unregulated markets to limit the impact of the financialization of markets on price volatility, while also avoiding “over-regulation.”
- The issue of exporting instability when one country stabilizes its own market.
- The current lack of successful experiments in the area of insurance in the framework of the World Bank program on price risk management.
- The interesting case of the rice market, for which there is no futures market and that has not been financialized. This forces one to look at other determining factors in the recent price spike and volatility.

Afternoon Session

Producers’ Point of View: Case study on the Union des Groupements pour la Commercialisation des Produits Agricoles de la Boucle du Mouhoun (UGCPA, Burkina Faso)

Mr. Dioma **Soumabéré** (UGCPA, Burkina Faso) discussed the importance of price stability for small farmers and shared the results of a local initiative in which organizing farmers and involving them in marketing is making it possible to obtain much more stable and higher prices. Indeed, farmers’ organizations have often had to fill in for the State in setting up market regulation instruments. He raised the issue of the balance between the State and private actors in this regulation (some functions remain the sole responsibility of the State, such as all regulatory matters). He specified that the UGCPA is currently participating in the constitution of the country’s food security stock and its intervention stock.

Round Table: The Viewpoint of the Political World

Is it necessary to act on agricultural price volatility? Why? How? On what level (national, regional, international)?

- Mr. Jonathan Brooks (OECD) stated that price instability requires both instruments acting on the long term and poverty and measures aiming to avoid the most harmful short-term impacts of sharp price hikes. However, price stabilization is not an objective in its own right (the goal is, rather, to protect vulnerable populations’ purchasing power), and we know that it is associated with multiple problems—costs, inefficiency, government failures. Despite these difficulties, market stabilization has a role to play because of the existence of market failures and poorly developed safety nets. Direct intervention is thus necessary to correct market failures, for example by improving information, actors’ capacity to manage risks and safety nets. The international level has a key role in the transmission of imbalances

on national markets and its impact on national policies, in function of whether or not international markets are able to manage local hazards. In the rare—but nevertheless plausible—case that international markets experience a rapid price hike, it is necessary to finance poor countries so they can withstand this growth in their food bill.

- Mr. Hafez Ghanem (FAO) discussed the problems involved in measuring price volatility (according to him, the right measurement is the difference between real and expected prices). Volatility must be expected to rise in the coming years for several reasons: growing market integration, rising cereal exports from ex-USSR countries (with much more variable productivity than elsewhere), the increasingly close link between oil markets and maize, the financial deregulation in the mid-1990s, and changes in storage policies (smaller emergency stocks). Among his recommendations, he identified various areas for potential action: the constitution of minimum emergency stocks (as experiments in regulation stocks have been negative overall), market transparency, the definition of a regulatory framework for futures markets (without falling into the trap of over-regulation because they are important for cash flows and risk coverage), the development of insurance systems (with the support of investment banks), the establishment of safety nets for the most vulnerable populations, and the definition of new global governance, notably to prevent the (legitimate) decisions of some countries to restrict exports from being costly for the rest of the world.
- Mr. Ousmane Djibo (NEPAD) insisted on the importance of the regional level when setting up economic policy measures. He presented the African Union's agricultural program, which aims to improve food security through increased investment in the agricultural sector and the associated gains in productivity.
- Mr. Moses Shaha (ESAFF, Kenya) discussed the harmful nature of price instability for small farmers in Kenya and the difficulties associated with State intervention and how this intervention can increase uncertainty if it is not properly conducted. The experiment conducted by the ESAFF, based on farmers' groups, shows that success is possible on the local scale.
- Mrs. Lourdes Adriano (ADB) discussed the dramatic impacts of the 2008 price hike in the Asia-Pacific region, and insisted on the urgency of setting up measures aiming to lessen the negative short-term impacts on poor consumers without neglecting the medium and long term. New solutions on the international, regional and national level must be found based on renewed forms of public-private partnerships. Buffer stocks or reserves, managed in a transparent and predictable manner, must be set up on the national and regional levels, trade agreements must discourage protectionism, safety nets must be improved, and investments must be made in commodity chains. Market operations (information), agricultural research, and north-south and south-south cooperation are also necessary.

Conclusion: The Day's Lessons by Mr Frédéric Bontems, Director of strategic management and prospective, Agence Française de Développement

The devastating impacts of the volatility of agricultural product prices on producers and consumers, particularly the poorest, have placed this issue at the heart of the G20's concerns. The goal of the day was to contribute to reflections on the possibilities and techniques for public intervention in this area. Three essential points must be drawn from the study:

- the policy dimension—price volatility has direct consequences on countries' social peace;
- the multi-scale nature of the phenomenon—price instability is present in international markets as it is in local markets, and there are complex relationships between these scales; and
- the presence of two sources of instability, one linked to natural conditions (exogenous) and the other linked to projection errors (endogenous).

Seven lessons can be learned from the day:

- One must be precise and attentive to the words used; regulation must be defined as all mechanisms in which private actors and public authorities interact to ensure that foodstuffs markets operate efficiently and benefit food security.
- Regulations are needed on the national/regional level as well as on the international level to stabilize food prices.
- Lowering volatility is a necessary factor in agricultural development, but it is not sufficient.
- A panoply of instruments must be used, depending on the context (country/products) and whether it is an emergency situation or not.
- The transparency and predictability of national and regional public policies are crucial for success.
- On the international level, market regulation must make it possible to avoid bubbles and protect the poorest countries in the case of sharp food price increases.
- In this way, one can say that price stabilization is desirable, but that its feasibility relies on tricky conditions, depends on the context, and must continuously be adapted to the context. Furthermore, it is necessary to differentiate between short-term effects and long-term effects, and take into account these different timelines when defining policies.

2. Managing Food Price Volatility : results of a two days workshop

Discussions among about fifty experts with contrasted positions

C. Peter Timmer

I am grateful to have an opportunity to offer my observations on the two days of discussions we just completed at CIRAD, on the draft paper prepared by GREMA that Françoise has just summarized so effectively. “Managing food price volatility” is “my” topic. It has been my intellectual passion for over 40 years as an academic researcher, a teacher, and an advisor in the field, especially in Indonesia, China and Vietnam. We had rich and vigorous discussions on Monday and Tuesday and I hope to capture some of that flavor today

What does price instability have to do with food security? We all agreed that (in general),

- 1) Price *spikes* hurt poor consumers;
- 2) Price *collapses* hurt farmers; and
- 3) Price *risks* reduce investments, including by smallholder farmers for agricultural modernization.

But my own work suggests that food price instability also has a deeper and more insidious impact: it slows down economic growth and the structural transformation that is the pathway out of rural poverty. Thus food price instability really hurts the poor in both the short run and the long run.

Consider a very simple model of food security that focuses on the *short run* versus the *long run*, and on the *macro* level (of policymakers) versus the *micro* level (of household decision makers). When the food economy is reasonably stable (and this is only possible when the financial system is reasonably stable as well), macro policymakers can focus on long-run investments and policies for inclusive economic growth, and households can focus on building their skills, human capital and savings. The goal is to get to the “lower right” box where households have sustainable access to food in the long run. That is, they are food secure.

But, if the food economy is highly unstable, constantly in crisis, policymakers spend all of their time and budget resources in the “upper left” box, trying to stabilize food prices and provide safety nets for the poor. During food crises, vulnerable households often *deplete* their human and financial capital just to stay alive. This is the world of poverty

traps and enduring food insecurity. We are also trapped in short-run, macro and humanitarian *crisis management*.

How do we break out of these traps? Franck Galtier and his colleagues have designed a simple framework to think about managing food price instability. It builds on two critical distinctions: between *preventing* food price instability and *coping* with the consequences of unstable food prices; and between the role of the *private sector* in each domain and the *public sector*.

Thus there is a 2x2 matrix with 4 cells (just like my food security matrix), which he labels A, B, C and D.

	Prevent	Cope
Private	"A" storage & transportation	"B" insurance hedging & futures markets
Public	"C" bufferstocks import/export controls	"D" safety nets

With the rise of market fundamentalism since the mid-1980s, most donor efforts have concentrated on A and B measures, and on D measures when food crises still erupted ("ABD" has a special meaning in US academia—"all but dissertation"—which means the student is "smart but not complete"). In view of the lack of success with the ABD approach, the issue at the workshop was whether approaches to "C" might work. Are there public interventions that could stabilize food prices?

We did not reach any specific conclusions, but we clarified the issues considerably. I will use a simple framework to explain our discussions:

There are four levels of action: Local, national, regional and international. Although the background paper focuses mainly on the distinction between national and international actions, our discussions included significant examples where farmer organizations at the local level and regional bodies such as ASEAN+3 have engaged in price stabilization initiatives.

Within these four levels of action, we discussed five main issues, and they were often specific to one of the levels of action just presented.

Where is price instability a problem?

At the local level, highly unstable farm gate prices are a significant burden to small farmers seeking to invest in modern agricultural techniques and raise their productivity. Consuming households (and many smallholder farm households are net consumers) are obviously the locus of burdens from high food prices and especially from price spikes.

At the national level, the concern is for price stability in major urban markets and is often the focus of action by macro policymakers.

At the international level, the concern is for the level and stability of food prices from the major exporters, and the possibility that export barriers might prevent access to food by importing countries in times of rising prices.

Which commodities need more stable prices?

Our discussion focused on three categories of agricultural commodities: food staples, cash crops and perennial tree crops. Prices of cash crops are a real concern to farmers but have relatively little impact on consumers. Similarly, perennial tree crops present special financing problems because of the long time horizon for the investment to start to pay off, and there is such a sharp distinction between short-run marginal costs and long-run average costs, but price variability has little impact on consumers.

Accordingly, most of our discussion was on price stabilization techniques for the major staple food grains, especially rice, wheat and maize. Although these commodities have much in common because they often form a large share of energy input among the poor, there was a clear recognition that the world rice market behaves very differently from the world markets for wheat and maize. There are other food grain markets with their own unusual trading regimes: cassava, millet and white maize, for example, often behave more like “non-tradable” commodities than the tradable commodities with large, liquid international markets. Any efforts to stabilize food grain prices will need to recognize the special characteristics of individual commodities.

What instruments are available to stabilize food prices?

We discussed three main categories of stabilization instruments: border (trade) controls, buffer (reserve) stocks, and regulation of financial markets involving agricultural commodities.

Border controls are a national issue because nations are defined by their borders. Economists do not like political borders very much because they impede the free flow of goods and services (and hence reduce the “gains to trade”), but the nation state is the main modern actor in many areas of economic, political and diplomatic initiatives. Borders, and border controls over trade, are a reality. The WTO seeks to impose disciplines on what border controls are legitimate, and agriculture has been included in those disciplines since the Uruguay Round, but the food crisis in 2007/08 revealed a serious asymmetry in how the WTO approaches border controls for food grains. Virtually all of the trade disciplines, and all of the current negotiations under the Doha Round, refer to import barriers rather than export controls. There was wide agreement at our workshop that export controls on food grains have been a significant source of price instability. The asymmetry of trade discussions should be rectified, but it is difficult to imagine grain exporting countries agreeing to significant restrictions on their ability to control exports as a means of stabilizing their domestic food prices. Food security is simply too important as a political mandate for national leaders to forgo this policy instrument.

Large reserves of grain, at whatever level, have the obvious advantage that they can be drawn on when harvests are damaged or there are surges in demand. Large reserves tend to hold price levels down as well, although there is a clear endogenous relationship, explained by the theory of supply of storage, between expectations of price changes and levels of stocks held by the private sector. The issue is whether the public sector should be holding reserve stocks of grain above and beyond the willingness of the

private sector to hold stocks (and the subsequent willingness of the private sector to hold these stocks in the presence of public stocks).

Holding public reserve stocks faces three key issues: their *costs* (and who should pay), *monitoring* the level and quality of stocks (and who should manage them), and *enforcement* of agreements to buy and release stocks according to some transparent rules. Each of these issues has been difficult to resolve even in the case of national stocks. There is virtually no experience at the international level of procuring, managing and releasing reserve stocks on behalf of an agreed protocol to stabilize grain prices. The experience of using Japanese “WTO” rice stocks in 2008 as an external supply source to prick the rapidly rising spike in world rice prices was clearly a unique episode (and even then the stocks were never actually released). Very serious doubts were expressed at the workshop that any internationally viable scheme of holding reserve stocks of grain for stabilization purposes could be agreed and implemented.

Regulation of financial markets for agricultural commodities was vigorously discussed, with attention focused on two possibilities: re-imposition of position limits on speculative positions for important food commodities traded on futures markets (such as existed before the financial deregulations in the 1990s), and a “Tobin-tax” on each financial transaction to slow the emergence of speculative bubbles. The difficulties with either approach were clear—many of the financial transactions in commodity markets do not actually take place on organized exchanges where regulators can see what is happening, no single market could initiate such regulations unless others around the world did as well, and there is no experience with taxing financial transactions of this sort. Still, it was recognized that the “financialization of food commodities” is a relatively recent and rapidly growing phenomenon and urgently needs more research and understanding.

How can stabilization interventions be governed?

The issue is important at three different levels (four, if the regional level is somehow distinct from the international level because of greater commonality of interests).

At the local level, especially for farm or community organizations, governance would seem to depend on active participation and “voice.” The great advantage of local initiatives, of course, is precisely their ability to be responsive to local conditions and aspirations. General guidelines on how to manage them are probably not very useful.

At the national level, democratic processes are widely thought to be the basis of good governance generally, and should provide appropriate feedback to national leaders on how well they are doing in managing the country’s food security. Still, it is important for outside analysts, donors and the private sector to realize that food security is inherently a political issue subject to political decision making. It is certainly desirable that good technical analysis, especially economic analysis, be brought to bear on these decisions, but history has shown how difficult it is to make such analyses relevant and implemented.

At the international (and regional) level, negotiations informed by transparent technical rules would seem to be the best way forward. But there was deep skepticism at the workshop that such negotiations could be successful.

How do we evaluate success or failure in stabilizing food prices?

At the local level, the basic issue is whether sustained gains are seen in agricultural productivity on small holder farms. Of course, many other ingredients are needed for “getting agriculture moving,” but a major rationale for stabilizing commodity prices at the farm gate is to enhance the profitability of these other investments. The feedback from success at this level is also critical: nothing would improve the outlook for food security more effectively than rapid increases in farm productivity, especially for staple food crops grown by small holders.

At the national level, success in stabilizing food prices is likely to be seen primarily in greater political support for the government that gets credit, and ultimately in a more stable investment climate that should stimulate economic growth. Although the political payoff is likely to be primarily in the short run, the contribution to economic growth will only be apparent to economic historians, and to the country’s consumers as they gradually escape from poverty.

At the international level, if a price stabilization accord can be agreed and implemented, success will almost certainly have to be measured using technically sophisticated but transparent methodologies that are part of the initial framework. Cost-benefit analysis is a powerful tool when stakeholders agree on the result.

Our conclusion? Reducing food price volatility is likely to be a highly specific process—depending on commodity, country, and global market conditions—but we should encourage countries in this process, NOT discourage them.

Some final thoughts, after the questions: There are some broad lessons, even when viewed through my “rice lens.” Rice has not been “financialized,” but there are still speculative hoarding episodes driven by widespread expectations of scarcity and surplus. At the country level, prices WILL be stabilized (or at least serious efforts will be made to do so). The issue going forward is whether these country efforts can be done in a way that has less impact on world prices. The most promising avenue in this regard is regional agreements on rice reserves (ASEAN+3), but these need a price stabilization objective as well as an “emergency” objective.

3. The impact of agricultural price volatility on supply chain stakeholders in Burkina Faso

Summary report based on interviews conducted with actors in agricultural sectors and their trade associations in Burkina Faso

Inter-Réseaux Développement rural

Affects of price volatility on agricultural actors in Burkina Faso

Producers

Intra-annual volatility

Although most farmers are aware of the advantages of stocking production, they are often **forced to sell at harvest time** when prices are lowest. Two phenomena can be observed. (i) *Over-commercialization* in relation to household needs, due to liquidity constraints at harvest time and lack of storage capacity: during the lean season, when cereal availability decreases and prices are high, households with a food deficit have no choice but to buy the same products they sell on the local market at much higher prices. (ii) *Undervaluation* of produce: this occurs when farmers in surplus areas sell low during harvest season, rather than waiting for the lean season, when profits are higher. This can be explained by the absence of commercialization credit and inadequate individual and collective storage facilities.

Inter-annual volatility

Producers struggle to generate high returns and thus stabilize market supply due to **lack of long-term support to agricultural production**. Production support such as input subsidies, access to credit, improved extension, and farm management advisory services can help farmers improve profitability and secure their production systems. Lack of security induces highly variable returns that exacerbate volatility. Combined with uncertain market opportunities and unpredictable prices, insecurity pushes farmers to adopt risk minimization strategies that discourage investment in intensification.

As a result, farmers struggle to plan their economic activities, as price volatility makes it difficult to obtain a lucrative price every year. Farmers invest without knowing whether even their production costs will be covered. The result is increasing indebtedness, which further limits their ability to access credit and make investments. The instability means that prices cannot serve as signals for farmers to make decisions on what to plant and when.

"Price instability destabilizes the producer, who is unable to organize operations in a way that helps him develop. The farmer does not know at what price his products will sell. He makes loans and buys fertilizer on credit, without knowing the sale price. If

commodity prices fall, he cannot honor his commitments and will spend the next season in debt, and the one after that trying to bounce back." (source: UGCPA)

Farmers' organizations

Farmers' organizations (FOs) often have difficulty planning. Indeed, FOs that provide marketing support to their members through "pre-payment" (or advance payment) systems, for instance, grapple with managing price risk: it is difficult to set the purchase price for members when the market price is unknown. For FOs that market produce collectively, choosing when to release stocks is also a challenge: at what point are market prices high enough? When should the FO hold on to stocks, in hopes that prices continue to rise? These difficult decisions are exacerbated by the fact that FOs often have little flexibility in terms of their treasury, and practically no room to take risks or deal with market downturns.

Price volatility can also undermine collective dynamics, particularly when it comes to marketing produce. For example, when production is stored to be sold later, if prices do not increase enough, the operation will fail and the FO will not be able to cover the cost of collecting, storing and packaging the produce.

Spikes and/or unanticipated price changes can also lead members and/or purchasers to default on commitments or contracts. Thus, during low production years, farmers do not always respect commitments to deliver produce to the FO, opting instead to sell to the highest bidder. This phenomenon is amplified by the complexity of social relations between producers and traders.

Processors

"The first consequence is a lower profit margin for processing firms; it is rarely possible to pass on the totality of commodity price increases to the finished products, as this would scare off customers." (source: Afrique verte)

The steady rise in commodity prices in recent years has significantly reduced margins of small processing units and companies, threatening their survival.

"There have always been price fluctuations, but they stayed within reason. Since the price hikes of 2008 (32%), cereal prices have become unbearable and we hope that the good harvest in the 2009/2010 season will bring them down." (source: Société Faso Riibo)

These financial constraints make it difficult for companies to access credit, therefore reducing their ability to purchase raw materials in large quantities when prices are low.

Intra-annual price variations combined with lack of storage facilities (either unavailable or too costly to acquire) force these processing companies to buy part of their raw materials at high prices during the lean period.

Price volatility sometimes pushes producers to default on contracts with processors in order to sell to the highest bidder.

Rural and urban consumers

Rural households: A majority of consumers are also producers. We can distinguish three categories of households: (i) non-producing households, which are entirely dependent on market prices in the same way urban households are; (ii) households producing a net deficit, i.e., production does not cover family food needs. They are strongly affected by price volatility, especially increases during the lean period, which affect their food security; (iii) households producing a net surplus, i.e., production covers food needs throughout the year. These households are affected by price volatility the same way producers are: falling prices at the time of sale affect the household's disposable income.

Urban households: Urban households make consumption choices based on the prices of imported and local products. The most vulnerable modify their eating habits to cover food staples, and when the situation worsens, they resort to debt and eat fewer meals a day. Dairy products, meat and vegetables are reduced under this strategy, which strongly impacts the nutritional situation, particularly of young children. When the crisis worsens, food riots are likely to break out in the cities.

The role of traders in the functioning of markets and their impact on price volatility: an ongoing debate

The interviews conducted for this study showed a genuine difference of opinion on traders' impact on price volatility. Some actors criticize their speculative tendency to hold on to stocks when prices are high and commodities scarce. Interviewees mentioned traders' practice of drastically reducing purchase prices in order to take advantage of producers' weak negotiating capacity and high liquidity needs, thus driving them to sell off their products, which are sold at high prices in deficit or remote areas.

However, others stressed the importance of traders, especially during deficit years, when they supply the market with purchases from neighboring countries. Traders have the ability to relieve isolated areas by marketing their products and/or providing access to products.

"In 2004/2005, at the peak of the food crisis in Burkina Faso, the cereal deficit was such that citizens and the government accused retailers of hiding stocks. An emergency meeting was convened at the Chamber of Commerce to ask merchants to bring out the cereals! We, the traders, proposed to wait 20 days, while we went to buy cereal in Ghana. The 18th day, we brought 20 trucks of cereal to the Ouagadougou market.," (source: member of the cereal industry trade association in Burkina Faso)

Although traders play off the volatility of prices to recoup this type of activity, interviews reveal that some traders face the same lack of investment capacity for long-term storage (borrowing in order to store large quantities). Moreover, they are subject to price risk during atypical years when abnormal market behavior results in small price fluctuations between harvest and the lean season. Many traders rotate their inventory several times a year (buying and selling fast) and therefore generate only very small margins on each rotation. Their expenditures are proportional to their ability to open up remote areas. The lack of organization of these actors and the emergence of "opportunistic traders" due to soaring prices raises the issue of regulating these actors.

In sum, the impact of price volatility on actors in the agricultural industry is mostly negative. However, it is important to keep in mind that some actors benefit from the increased intra-annual food prices to recoup costs of their operations. This is the case for intermediaries, but also producers who store produce and market it as a group (collective marketing, warrantage), thanks to a marketing loan that allows them to delay the release of produce on the market. "Typical" intra-annual volatility (low prices at harvest, high prices during the lean period) is, in this case, beneficial to producers who have storage capacity. The situation is problematic in the following cases: (i) for producers who cannot store, (ii) a market shift prior to or during the lean period for various reasons: massive imports, food aid or subsidized prices. There are also cases where price increases of imported cereals (and manufactured products like pasta) improve the competitiveness of local cereals (and local agro-food products), which can have a positive impact on producers.

strategies to cope with price volatility

Farmer organizations' strategies

To limit the impact of volatile commodity prices on their members, provide them market channels and a lucrative price, farmers' organizations implement different strategies and instruments. The following table provides an overview⁶.

Type of instrument/strategy	UGCPA	UDPNS7	FepaB	Mogtedo	CISV ⁸	FEPPASI	FNGN
Collective storage and marketing	X	X	X				
Warrantage					X		
Contracts with public and private actors	X	X	X				
Contract farming			X				
Agricultural stock exchanges			X				
Contractual relationship with processors				X			
Establishment of regional cooperatives						X	
Production support: input credits and training (IT, CEF)	X	X	X	X			X
Guarantee fund	X						
Price control	X			X			
Volume control	X			X			
Buffer stock							X
Security fund	X						
Quantitative restrictions on market access				X			

⁶ This overview is not exhaustive.

⁷ Departmental unions of cowpea producers in the province Sanmatenga.

⁸ CISV is an Italian NGO that supports a farmers' cooperative in southwestern Burkina Faso.

First and foremost, storage

Some FOs offer collective storage facilities, for marketing purposes or not: UGCPA collects and stores members' cereal surplus to sell during the marketing year. CISV supports a cooperative that practices warrantage by allowing its members to store produce so they can sell it during the lean period and obtain warehouse credit to develop other income generating activities.

Access to finance and production support

Some FOs also implement strategies to improve access to credit for both the organization and its members, such as the use of warehouse receipts, or a guarantee fund (sometimes backed by financial partners or members' contributions, as in the case of FepaB). These tools facilitate access to credit lines from microfinance institutions (MFIs) and commercial banks to (i) finance inputs for members, and sometimes, (ii) provide cash advances on members' standing crops (the case of UGCPA).

Strategies to hedge price risk

FOs use several types of strategies to hedge price risk. (i) They spread payments over the crop year by making advance payments prior to harvest (November). Prices are then revised at the beginning of the marketing year (January), at which time rebates or additional payments are made. (ii) Similarly, in the case of warehouse receipts, credit is calculated by applying a discount to the crop value, to protect members from prices that are not high enough to recoup their costs. (iii) FOs strive to gather as much information as possible on external factors influencing prices, so as to calculate a fair price at each stage. (iv) FOs consult with other sector actors to fix prices. In Mogtiedo, producers and parboilers negotiate the price of paddy and impose a floor price on all traders who buy on this market, which is controlled by the FO. (v) To protect themselves against potential years of instability, some FOs implement a guarantee fund to cover deficits if the fixed price is higher than the selling price, so as to avoid indebting farmers (the case of UGCPA, which takes 2 FCFA per kilogram of rice stored, to finance the fund).

Strategies to ensure marketing channels and the matching of supply to demand

The concentration of supply in one FO is an asset for buyers who want to simplify transactions by limiting the number of points of purchases. The interviews revealed different forms of contractual relationships: post-harvest contracts with institutional buyers (e.g., PAM/P4P, SONAGESS), which use a bidding process to supply their retail distribution network based on strict quality criteria (FepaB, UGCPA); post-harvest contracts with traders and processors (the case of most FOs), which require good negotiation skills; specific contracts between actors from the same supply chain (as in Mogtiedo); and finally, contract farming, as established by FepaB via production contracts between the FO and its members, used to honor its commitments with WFP (P4P) and the Burkinabe Brakina brewery.

Participation in cereal stock exchanges is another way to find market opportunities for producers and FO members by connecting sellers and buyers in the national or sub-regional area.

Volume control

Interviews revealed the case of one FO that sets quantitative thresholds for products going to market. This is the case of the cooperative in Mogtado, which promotes the flow of its members' products to the market before opening it up to products from non-members. This same cooperative has a buffer stock (constituted through repayment in kind of input credit) for when market volumes are low, thus allowing it to regulate prices at the local level.

Member loyalty and reinforcement of the cooperative spirit

One of the challenges for FOs that market their members' produce is to guarantee volumes needed to ensure profitability. This requires members to meet their delivery commitments and repay credit in kind. To address this problem, FOs use different strategies to ensure member loyalty including (i) provision of services: access to credit inputs, training, technical advice based on incentive systems that rank producers in different categories depending on their ability to honor commitments, the highest ranking providing more advantageous services (eg., UGCPA) and (ii) the payment of dividends on profits generated by product sales.

Joint strategies to drive local regulation

To address the problem of poorly organized markets (especially in border regions, as the FEPPASI experience demonstrates), some FOs rely on cooperation/partnership strategies with decentralized services of the State, local and sometimes municipal governments. The goal is to create favorable conditions so that everyone can play their role in the market.

Other findings on the choice and level of implementation of FOs' strategies:

Strategies that differ in scale: The majority of strategies implemented by FOs are limited in scope. Either very localized (e.g., the self-managed Mogtado market), or limited to local, occasionally departmental, or regional levels (e.g., UGCPA, which contributes 5% to SONAGESS stocks), these initiatives do not influence the market in terms of quantities.

Strategies that differ depending on prices: When prices fall, it is in the interest of FOs to sell as a group, to benefit from greater negotiating power with traders. Conversely, when prices rise, FO members can make a profit by storing and selling later, provided they have the technical and financial capacity. In this case, the strategy becomes more individual than collective.

Strategies that differ depending on surplus areas and areas of chronic deficit

In surplus areas (such as the southwest), FOs focus on marketing the surplus of their members, while in deficit areas (such as the northwest, an area that faces food insecurity), FOs help members develop off-season crops like vegetables and other income-generating activities to mitigate cereal production deficits. The challenge is to secure incomes so that households can buy cereal. This is the case of the *Fédération nationale des groupements Naam* (FNGN), which combines the promotion of off-season crops with food granaries and training in soil fertility renewal techniques. Furthermore,

to better match supply to demand and supply deficit areas with products from surplus areas, FepaB has implemented a strategy to sell production from union affiliates that produce a surplus to affiliates that face deficits. FNGN pursues a similar strategy. The initiatives of *Afrique Verte/Aprossa* are along the same lines.

Processors' strategies

Despite price volatility and lack of government and international aid, which affects the capacity of processors to secure their incomes, some strategies have nevertheless been put in place.

The federation of agro-food industries in Burkina Faso (FIAB) wants to strengthen its members' capacity (small agro-food processing units) to contract and negotiate with FOs: two key factors to the process of stabilizing raw materials prices.

Processors choose not to increase prices of processed products despite fluctuations in the cost of raw materials, so as not to destabilize consumers and lose a clientele that is difficult to keep loyal.

"We set an average price which is the balance point between the low prices of raw materials at harvest time and the high prices during the lean season. The goal is to keep a fixed price throughout the year." (source: Société Faso Riibo)

Another strategy is to maintain the selling price by reducing the volume per bag.

"This year, our company was highly threatened by the sharp rise in sugar prices (which have more than doubled). This increase is the result of a government policy that requires sugar importers to first purchase supplies from the national sugar companies, before importing the remainder. The result is that prices have soared, because local sugar supply does not cover demand. We do not want to increase the selling prices of our products, so we have chosen to reduce the volume per bag, otherwise, we would already be bankrupt." (source: Société Faso Riibo)

Food security strategies of producer households and rural consumers

At the local level: implementation of village cereal banks to store food in preparation for the lean period. Families may also have their own granaries.

Trade associations strategies

Lobbying the government is one of the main strategies of agricultural sector trade associations: negotiating agricultural finance, renewed involvement in national agricultural production, protection of local markets vis-à-vis imports and better market regulation.

The *Comité Interprofessionnel des Céréales du Burkina* (CICB), for example, is working to develop cereal marketing cooperatives at the local level, in collaboration with local elected officials. The idea is to identify a number of markets in Burkina Faso to create the first cereal cooperatives.

"Local elected officials will identify a rural municipality to sell cereal on market day. A market study will be carried out in the vicinity of the town the day before the market to fix a guaranteed minimum price the next day. On market day, the producer brings his

cereals to the market, the Comité will monitor the buyers and sellers entering the market and make note of quantities. The next day, the producer comes to receive payment for sale. The trader no longer has to intercept farmers on the way to the market to buy at lower prices. We have identified three markets where we will implement these cereal marketing cooperatives by early 2011."

Some trade associations and FOs work to secure markets for local products. In the case of the trade association *Comité interprofessionnel du riz du Burkina Faso* (CIRB), this involves promoting local rice, as a way to ensure more stable opportunities for producers through improved product visibility. To cope with rising prices of local rice compared to imported rice, CIRB set up flagship stores with illuminated signs indicating that "this seller is licensed by the trade association - high quality local rice sold here": "CRIB, sellers of local rice". The strategy is to publicize, including through radio and TV, the licensed shops that sell good quality rice at an acceptable price. The idea is to improve the visibility of local rice as well as fight against fraud (resellers who sell imported rice packaged as local rice).

Government intervention in the regulation of markets in Burkina Faso: initiatives, perspectives and recommendations of stakeholder

Regulatory instruments used in agricultural markets in Burkina Faso

Price **stabilization** instruments

Production support policies based on subsidizing agricultural inputs and setting a floor price: since the 2008 crisis, a government "rice" operation has subsidized fertilizer and seeds, which have been distributed to farmers on credit with repayment in kind at delivery (amount based on the floor price set by the government);

Market Information Systems (MIS): dissemination of price information to avoid local speculation (TV, radios);

Stocks in SONAGESS: SONAGESS has 2 stocks:

- The National Security Stock is designed to address food security, and has no impact on price volatility due to small volumes (approximately 30,000 tons);
- The intervention stock, which involves a few tens of thousands of tons more, is also inadequate and unable to play a regulating role.

The government also sets up on an ad hoc basis **border control instruments**: for example, restrictions on import tariffs and/or border closings in the event of price spikes. These measures go against Community trade control regulation (liberalized regional domestic markets and Community trade policy at the borders).

Instruments to **reduce the effects** of price volatility retroactively

These measures fall under the strategy of prevention and management of food crises, and generally target vulnerable populations:

Subsidized prices in deficit regions: the objective is to limit price hikes in deficit areas where food insecurity is high.

Distribution of food vouchers (Ouagadougou and Bubo Dioulasso), via a licensed distribution network.

Free distribution of seed and fertilizer.

Food and cash for work initiatives, promotion of income generating activities, etc.

Perspectives of agricultural sector stakeholders on government intervention in market regulation: challenges and recommendations

Marketing: support collective marketing in surplus areas and regulate the activities of traders

If FOs market their production collectively, traders will be able to buy in large quantities at lower prices and pass on this savings to consumers.

Today in Burkina Faso, there is no licensing system for traders; the result is that anyone can get involved. Government regulation is recommended to improve the transparency and functioning of markets heavily influenced by this group of actors.

Improve transparency and market information

Interviews revealed a lack of transparency in the very markets that need information to operate effectively. It is the trade associations' role to encourage information-sharing between supply chain actors, but they need support in the form of government regulation to do so.

Moreover, many FOs stressed the lack of knowledge and information on the flow of cereals within the country and with neighboring countries. Here, too, the government could play a regulatory role by requiring actors to communicate on their levels of stocks, location, business operations, etc. This would make it easier to identify surplus and deficit areas.

Mobilization of buffer stocks and the establishment of social safety nets

The SONAGESS stock is no longer decentralized. There is a need to move towards a decentralization of food security stocks. In addition, these national stocks are not big enough to truly affect markets. The volume of the national security stock has not been revised since the early 1980s, while production has tripled and the population more than doubled.

Better coordination between public and private actors, particularly FOs

Private actors, especially FOs, are sometimes destabilized when faced with unexpected and inopportune government interventions such as subsidized prices, food aid operations, and input subsidies, which can disrupt the market and create distortion. There is a need to improve dialogue between public and private actors to enhance the effectiveness of interventions and market predictability.

Agricultural policies

The government only reacts once a crisis is underway, when it really should intervene beforehand, especially to support production. Pre-crisis interventions include training

farmers, providing them adequate equipment, and supplying quality inputs. There is a need to implement policies that encourage production, storage and marketing.

Government support to processors is insufficient. Consultative frameworks are in place (CICB, CIRB, etc.), but overall, the productive phases of the agricultural supply chain receive more support than the processing and upgrading phases.

It is hoped that the government will implement a genuine strategy for financing agriculture and the various links in the supply chain. For example, one way to increase competition among traders and reduce speculation or unfair agreements, is to create and/or strengthen the business skills of traders (through credit).

There is a need to focus on sectors that are key to food security—namely maize and rice—rather than trying to promote all products (the current strategy of the Ministry of Agriculture).

Conclusion and recommendations: Striking a balance between public and private sectors in the regulation of agricultural markets in Burkina Faso

The volatility of agricultural prices in Burkina Faso is a structural phenomenon that has been around for several decades. Its consequences affect agricultural industry actors, especially farmers and their organizations, in diverse ways. Different actors have different interests when it comes to market functioning: traders, processors and farmer organizations who stock to sell surplus would like to benefit from increased intra-annual prices, but also hedge the risks of inter-annual variations. FOs in deficit areas have developed strategies to support income diversification and promote village food security stocks. While "typical" intra-annual volatility is easy to manage, these actors must face the challenge of atypical market downturns, when price risk is high.

Market unpredictability is the major constraint facing agricultural actors today. In light of the structural adjustment programs (SAPs) of the 1990s and reduced government involvement in the regulation of agricultural markets, actors have developed instruments (see table above) that are private-sector based but also designed to substitute government failures.

Today, **the government plays only a very small role in regulating markets.** Agricultural actors criticize the lack of market regulation (especially the lack of organization of traders); the ineffectiveness of national security and intervention stocks to regulate markets; the absence of support for production, processing, and upgrading local products; as well as uncoordinated, unexpected measures that can be counterproductive.

For their part, **FOs are developing interesting strategies that combine private and public-type instruments**, but these initiatives are being implemented on a very small scale—regional, at best. These FOs are largely supported by donors and technical assistance providers, without whom their activities would be seriously compromised. Moreover, despite the government's lack of support to FOs, it plays a key role in their operations, often serving as the major trading partner their products (e.g., UGCPA and FepaB). The current challenge is to find a middle ground between total reliance on private sector operators and the highly interventionist policies of the 1970s: **a joint**

public-private partnership approach to market regulation. This could involve (i) the introduction of a combination of instruments that aim to anticipate market behavior, (ii) a consultative decision-making approach that brings together supply chain stakeholders and government actors, (iii) price negotiations (price ranges) between public and private players.

FOs may be taking care of the production support needs of their members, but the government still has a role to play in facilitating access to agricultural finance. Similarly, even though FOs have taken it upon themselves to test new contractual forms to market their products, the government still needs to regulate traders' activities and takes steps to create a secure environment (by registering contracts, offering possibilities to take legal recourse, etc.). And while FOs can develop regulatory tools to control volumes on highly restricted markets, the government needs to more fully appropriate the country's production, to increase its capacity to stock food in case of crisis or price volatility.

Trade organizations offer an adequate framework for negotiations and to improve dialogue between the private and public sectors. They exist in several industries, including cereal and rice (the legislative process is underway), and their main role is currently to lobby and promote local products. It would be useful for them to develop their potential (i) to oversee contracts between sector actors and (ii) negotiate with government authorities.

Finally, we must not forget that Burkina Faso is part of a fast-changing sub-regional economic community. **Regional integration**, the free movement of goods within the sub-region, and the implementation of a regional agricultural policy should be considered as driving forces for domestic agricultural production. Discussions on regulation of domestic markets must be integrated into a more comprehensive approach to regulation within the regional economic community: (i) management of complementarities between major production and consumption areas, (ii) selection and coordination of regulatory instruments at different scales, and (iii) establishment of effective border tools to manage international price volatility.