

## Chapter 3 – Lessons from National Price Stabilization Experiences

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One of the main reasons for State withdrawal from agricultural markets in the mid-1980s was the poor efficiency and high cost of public intervention. As a result, it is useful to consider past and current experiences with price stabilization policies and derive lessons from them. A precise analysis of past experiences may indeed help define public interventions that maximize positive impacts and minimize adverse effects. This is the main objective of this section.

Fourteen case studies on price stabilization policies<sup>4</sup> in a wide range of (geographical, socio-economic, and political) contexts and periods have been analyzed in order to identify key factors of success and the reasons for failures. Then, some recommendations are formulated for the proper implementation of price stabilization policies and for further research on new possible areas for public policy.

### **3.1. A Wide Variety of Contexts and Objectives but Few Combinations of Policy Measures**

Over the past decades, price stabilization policies have been implemented in numerous countries and in widely different national contexts and periods. However, developing countries generally experienced the same historical trend in public policies: (i) strong public interventions until the mid-1980s, (ii) state withdrawal and priority given to the market until the end of the 1990s, and finally (iii) a return to public intervention in recent years. This evolution is in line with recommendations by international institutions, at least for the two first periods. It therefore underlines the importance of the official positions of these institutions.

The direct objectives pursued by interventions are diverse and highly dependent on the economic and social profile of each country. Low Income Countries tend to fight against the “poverty trap” and/or to protect consumers from soaring prices (i.e. Madagascar, Mali, Zambia, Kenya, and Malawi). Most Middle Income Countries seek to maintain low consumer prices in order to fight against urban poverty and promote the industrialization process, taking advantage of the improvement in competitiveness allowed by low wages (e.g. Thailand, or Indonesia). They also try to encourage agricultural production and a higher level of food independence through the incentive of relatively high producer prices (India and Indonesia). The objective can also be to protect the most vulnerable and malnourished people while specifically supporting

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<sup>4</sup> See the list of countries, products and periods under analysis in Appendix 1.

smallholder farming (e.g. Brazil). Finally, High Income Countries seek to protect their agriculture from external shocks in global markets in order to maintain their food independence, protect employment (e.g. the United States, the European Union, and Canada) and more generally aim to promote multi-functional farming (i.e. the European Union).

Domestic food price volatility in these countries can have different causes. Climatic factors affecting national production (for example, periods of drought in African countries can lead to large drops in national cereal production) tend to call for public interventions aiming at improving the operation of the domestic market (e.g. information systems, rural infrastructures, standardization, etc.), and opening borders for a better markets integration. Endogenous instability due to anticipation errors by players may call for other policies aiming at directly acting on marketed volumes in relation to demand and thus controlling boarders and using public stocks. International food price volatility may also lead countries to implement trade regulation measures, when small “price taker” countries are affected by price variations in international markets. In the fourteen cases studies we led, it is difficult to determine the relative weight of these different sources of domestic food price volatility: it is most likely that they both played a role. This partly explains why different kinds of interventions have been implemented.

Beyond the diversity of national experiences, broad characteristics in the content of implemented policies can be underlined.

Policies combine various instruments. This means that instruments are never implemented in isolation, but are always part of a package<sup>5</sup> (policy mix). The table in Appendix 2 presents the wide range of instruments implemented and how they are combined in most of the fourteen cases studies. Following the typology of the ECART study (see Box 1 and Galtier et al., 2009), they consist primarily of “C” instruments (that is, instruments aiming at minimizing price instability through public intervention).

In particular, two main policy mixes are used in most of the cases under analysis:

- (I) trade regulation through quantitative restrictions + production support (input subsidies, farm credit, agricultural extension, etc.) + buffer stock used to define a price band (India, Indonesia, Malawi, Thailand, and Zambia); and
- (II) trade regulation (through tariffs or quantitative restrictions) + production support (Mali, Guinea).

These two kinds of combinations of instruments aim at balancing supply and demand. When prices are considered to be too high, an increase in supply on the domestic

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<sup>5</sup> See Appendix 1 for information on the combination of instruments used in each country under analysis.

market is obtained by encouraging production or imports and limiting exports, as well as by releasing public stocks if available. When prices are considered to be too low, supply reductions can be achieved by (i) limiting imports and production through set asides or price level adjustments relative to inputs costs; and (ii) limiting producers' deliveries to the market (facilitating storage by producers).

Decreases in supply can be combined with increases in demand (public stocking, facilitating private stocking of products). In this case, "C" instruments are generally combined with "A" instruments (that is, instruments aiming to stabilize prices through private interventions), leading to a combination of public and private actions. In such a context, buffer stocks enable the government to directly increase or decrease the quantities available on the domestic market. Countries that do not use buffer stocks are generally engaged in structural adjustment programs (e.g. Mali in recent years) or have weak institutional and administrative capacities (e.g. Guinea).

Some countries use also "D" instruments to act on the demand side, particularly in case of food crises. This is the case of India where consumption subsidies directly focused on the target population in order to resolve the potential conflict between consumers' and producers' interests.

In Brazil, programs benefiting both specific groups of producers and specific groups of consumers (Agriculture's Food Acquisition Program, PAA) have been implemented. Some products from smallholder farms are purchased at a subsidized price and distributed to vulnerable groups of consumers.

**Burkina-Faso** mainly used "A" instrument through its "fonds de lissage", a risk mitigation fund combined with "C" instrument (input subsidies). Concrete implementation modalities vary widely across countries (Box 5).

#### **Box 5 : Diversity in Price Stabilization Policy Design and Implementation**

**Indonesia** sets a price band associated with external trade restrictions through the Bulog. The producer price and the input price/producer price ratio are used to monitor the production trend and mitigate the problem of excessive producer incentives and accompanying costs. The width of the price band was also seen as a key parameter. It was progressively widened with the development of private trading activities, in order to avoid eviction effects. Bulog procurement generally concerned only a small volume (around 10%) of marketed rice production. Rice prices were maintained near the level of international prices during the period 1970-1997. Government intervention proved to be highly reactive to the changing context during that period. Strong efforts have been made to significantly strengthen the logistical capacity and managerial procedures of the Bulog. Extensive analytical studies on key parameters (size of margins between floor and ceiling prices, size of buffer stocks needed, etc.) have been conducted.

By contrast, after the economic crisis in 1997-1999, producer prices were kept 30% higher than international prices in spite of the negative effects on the poorest and the absence of additional reserves of productivity.

In **Burkina Faso**, since 2006, the guaranteed producer price in the cotton commodity chain has been connected to the international price. However, with rising fertilizer costs, food inflation, and dropping international cotton prices, the real floor price for producers is not high enough to ensure sufficient earnings and encourage production, in spite of producer price smoothing. Consequently, producers are replacing cotton with maize in crop systems.

In **Guinea**, the “Fédération des Paysans du Fouta Djallon” (the Fouta Djallon farmers’ federation) organizes the negotiation of the producer floor price between producers’ groups and traders at the start of each agricultural campaign. Technical elements are considered during the negotiations such as production costs and inflation. The floor producer price varies from one year to the next, but all producers know the price in advance (predictability). This policy leads to a dramatic increase in potatoe production from 150 to 16000 tons over the last twenty years.

In **Zambia**, guaranteed producer prices through public purchases are higher than the current prices on wholesale markets, providing strong incentives for producers.

In **Thailand** and **India**, because of lobbying pressure, the guaranteed producer price is too high, disconnected from the international price, and generates excess supply. In India, the growth rate in maize production was lower during the liberalization phase (1991-2004) than during the periods of heavy government intervention in 1964-1990 and 2005-2010. Real prices for consumers tend to have fluctuated more during the liberalization periods than the do nowadays.

On the contrary, in **Malawi**, due to escalating costs (massive stocks accumulated in state warehouses or exported at a loss) and financial constraints in the 1980s, the Agricultural Development and Marketing Corporation (ADMARC) was often unable to defend the minimum support price for maize (as well as the ceiling price in the 2001-2002 crisis). The price band was annually revised and moved closer to international parity prices. Support producer prices were reduced or withdrawn in many areas, and this lead to development of parallel and illegal markets. Such a process also occurred in the 1970s in Madagascar and Mali, leading to a stagnation of production levels and an increase in imports.

In **India** in the 1970s, there was no difference between the guaranteed producer price for food sale operations to vulnerable groups through public storage (tool targeting consumers) and the support price for production (tool targeting producers). With the continuously rising support price (disconnected from international trends) and excessive public purchases, such confusion in targeting the population and pricing policies had negative effects on the food inflation rate.

### 3.2. Factors of Success or Failure

Case studies show a number of successes in terms of production levels, price stabilization, yields, consumer protection, and independency from the world market. Indonesia, for instance, shifted from the world largest importer of rice in the 1970s to a self-sufficient country in the mid 1980s.

A virtuous circle sometimes appears in poor countries stuck in the poverty trap, where the risks involved in production activities result in a strong supply response (see Box 6). Labor productivity and agricultural incomes tend to improve, provided that there are productivity reserves. Reserves of productivity may come from technological innovations such as the green revolution (improved seeds, high yield varieties) or from an increase in capital (public capital, like irrigation facilities or private capital bought by farmers through investment). While more capital often implies that less labor is used, the rising incomes associated to this increase in capital implies higher demand for non-agricultural goods and services as well, which offers employment opportunities in non-agricultural sectors. When the product under stabilization is an important part of consumers' diets, the price of food tends to fall, but producers' incomes do not drop because larger amounts of products are sold. The food policy dilemma is thus solved.

#### **Box 6 : The Key Impacts of Productivity Improvement**

In countries such as Indonesia, India, Zambia, Kenya and Malawi, the green revolution made new gains in productivity possible: improved seeds and high yield varieties of wheat, rice and maize. In **Indonesia**, new technology was available to allow labor productivity growth, and the stabilization of rice prices was one component of rice modernization. The other components were: a technical package (distribution of high yield varieties, provision of fertilizers and pesticides at a highly subsidized price), rural infrastructures (irrigation systems, roads, schools, market places, communication systems, electrification, public health facilities), extension services, education, etc. In **Malawi**, positive trends in maize production and yields in the 1983-1993 period can be explained by the implementation of a package of public policies including breeding programs, investment in agronomic research, extension, seed distribution systems, rural infrastructures, ADMARC's interventions, and fertilizer and credit delivery. Since 2005, the dramatic increase in maize production is also partly due to the dissemination of a technical package through the Agricultural Input Subsidy Program (vouchers for buying inputs at a subsidized price).

In a context of state withdrawal such as in **Guinea**, support production actions combined with seasonal prohibitions on potatoes imports have been implemented by farmers themselves, organized within the Fédération des Paysans du Fouta Djallon. The Federation has developed numerous services for its members: providing certified seeds and fertilizers at acceptable interest rates, extension, management advice, hydro-agricultural infrastructures, storage capacities, rural roads, etc.

It must be stressed that implementing these "green revolution" techniques requires large quantities of capital (improved seeds, fertilizers, and waterworks). It would not have been possible for peasants to get access to such inputs without credit, and access to credit would not have been possible without a minimum of output price stability. One might notice, however, that repeated access to credit also depends on harvest risks and input costs. Producer price policies have to take into account input costs if they want to maintain producers' revenues and their capacity to access credit. This is why policies combining output prices and input costs are particularly interesting.

However, a large number of factors are at stake, and instruments are combined, which means that the observed positive social and economic changes cannot be attributed to

price stabilization policies alone. Moreover, some measures have had negative unintended consequences that call into question the sustainability of the policies involved: increasing costs, inefficiency of state activities, eviction effects on private operators, large-scale corruption (see Box 8).

Several types of factors of success or failure for price stabilization policies can be identified and classified in two broad categories: (i) technical-economic factors, and (ii) political-institutional factors: policy effectiveness and predictability, consultation and negotiation among actors, problems related to rent seeking and corruption. They will each be addressed in turn.

### **3.2.1 Technical and Economic Factors**

The appropriate choice and calibration of instruments are critical in the success or failure of market regulation. This appears to be a very complex task that requires precise technical expertise. Case studies reveal four key points: (i) the level of the floor and ceiling prices, (ii) the impacts of initial endowment in factors, (iii) storage and financial capacities, and (iv) costs and management of over-supply.

#### **Floor and Ceiling Price Levels**

The level of the floor price (in relation to input costs) will encourage or discourage production. It has to be adjusted according to the context of the country. Poor importing countries will encourage production, especially if the product is a staple food. In theory, the band has to follow international trends (see Box 5) but, in the case of low international prices and very poor countries where most of the population is engaged in agriculture, it would be worth considering initially maintaining prices at a higher level. For many agricultural producers who are net buyers in developing countries, the issue is to both keep food prices low for consumers and maintain food prices at an encouraging level for producers (adjusted to production costs). In these situations, fertilizer subsidies could be an interesting option: they can make it possible to maintain an encouraging price for producers without raising prices for consumers.

Exporting countries should take care of their impacts on the international market and of rising costs related to increasing production (see Box 12). In order to reduce the risks associated with agricultural activities (see chapter 2), the floor price has to be publicly announced at least before the crop year starts.

The price band has to be wide enough so as not to discourage private operators. The gap is highly dependent on transport and storage costs in the country. A gap of 50% between the floor and ceiling prices would generally be sufficient to avoid the eviction effect.

Another question relates to the use of pan-territorial or differentiated regional prices: the former may be easier to implement but the induced effects on remote areas, which are in this way advantaged, must be taken into account; the latter make it possible to take into account transport costs and have less negative impacts on traders. The Malawi case study illustrates a situation where, because of high transportation costs, pan-territorial food prices tend to maintain production in some areas where it would not be profitable without pan-territorial prices.

### Impacts of Initial Endowment in Factors

It is worth noticing that price stabilization policies may have detrimental effects when the initial distribution of productive resource is very unequal (see Box 7). This kind of policy will benefit producers who are well endowed in land and capital more than others. Those who have the largest farms and the best links to the market are in a position to increase their marketable surpluses. In contrast, the price stabilization policy will not have any effect on farmers not trading on markets at all because their access to land is so limited that they do not produce enough to sell. For this specific population, other measures, such as free input distribution or income diversification support, have to be implemented. The question is slightly different for net buyers who sell their harvest and have to buy products at a higher price during the year. For them, price stabilization policies would improve their situation and maybe allow them to become net sellers. This underlines that pricing policies should not be addressed independently from other policies. Policy coherence needs to be sought in order to be sure that the pricing policy is pro-poor. The issue of inequalities in the distribution of production resources must be addressed in a serious way. In some cases, policies targeting specific sectors of the population may be an appropriate solution even if this involves complex institutional matters, as will be seen below.

#### Box 7 : The Importance of the Initial Distribution of Productive Resources

In **Zambia, Kenya and Malawi**, a large proportion of producers are net buyers.

In **Zambia**, a large share of producers do not have produce enough to sell surpluses. What is more, they never sell and therefore cannot benefit from a price stabilization policy. Since land distribution is very unequal, only the larger producers benefit from the policy at the expense of the smaller ones. Cereal consumption indicators show there has been little—or no—progress in food security and the increase in production is mainly exported while 40% of the population is affected by malnutrition.

In **Malawi**, agriculture generally consists of small-scale farmers. A critical issue is the very smallness of cultivated tracts of land (less than 0.5 ha per farmer). In this case, free input distribution programs seem to be very successful in terms of increasing maize production. These programs enable intensification, even for farmers who are not linked to markets but who will depend on the development of extra-farm activities to see an increase in their incomes.

In **Kenya**, agriculture is characterized by a dual structure: the top 10% of farms account for 85% of all domestically marketed maize, while 62% of rural smallholders are net maize buyers. Given this structure, the National Cereals and Produce Board (NCPB) policies designed to increase the domestic price of maize in 1995-2004 had the effect of transferring income from three million

urban consumers and almost sixteen million small-scale farm households (net maize buyers) to five million small-scale farmers in a high potential area for maize and a few thousand large-scale maize farmers (net maize sellers).

In **Brazil**, since 2002, in the context of very unequal distribution of production factors and incomes and a high percentage of the population in a situation of poverty, Agriculture's Food Acquisition Program (PAA) has been targeting specific population groups:

- small-scale family farmers, with a clear objective of strengthening smallholder farming (productivity and product quality) by purchasing products at a fair and stable price; and
- vulnerable consumers (through school restaurants, hospitals, associations, etc.) with a clear objective of improving access to food for the poorest, both in terms of quantity and quality (in particular, the distribution of milk for children).

However, such targeting requires strong administrative capacities (definition of criteria, registering, controls, etc.) that generally do not exist in LDCs.

### **Storage and Financial Capacities**

The size of public storage capacity and the access to flexible resources are fundamental parameters because the state has to be able to buy enough products to maintain the advertised floor price. As will be argued below, the credibility of the policy is of utmost importance. This implies that the state does what it has promised to do and therefore that it has access to sufficient financial resources and storage facilities. Storage could be the result of a public-private partnership where the state contracts with private actors for a given amount of storage. Such arrangements get private actors involved in the policy process and reduce the costs associated with public activities (generally higher than private actors' costs).

### **Costs and Management of Over-Supply**

When reserves of productivity exist, production may rise very rapidly and result in surpluses. This makes storage more expensive and the export of surpluses more difficult. It might generate adverse effects on the world market. Because many countries were not able to properly manage costs, they had to withdraw from market regulation. When a country shifts from importer to exporter position and when domestic prices are higher than international market prices, the issue of how to deal with surpluses takes on the utmost importance. In the past, this has often been managed through export subsidies at very high cost (European Union) or through international food aid (United States). Such policies create unfair competition and may damage the local production of trading partners (see Box 8). Policy adjustments are therefore crucial to avoiding excessive costs. This could be done by decreasing the level of floor prices (but at the cost of bankruptcies if farmers had to go into debt), quantitative limits on production or measures such as contract farming (see below), which provide a guaranteed floor price for only a predetermined quantity of production.

While food price stabilization policies' costs such as public storage are high, they have to be compared to food price instability costs (social costs derived from food price instability for producers and/or consumers). These later costs are difficult to estimate and further research is needed to carry out cost-benefits analyses of food price stabilization policies that consider the welfare of tax payers, producers and consumers alike.

It also seems inefficient to maintain high prices to support an agricultural production for which a country does not have any competitive advantage (and that would not be competitive without the price support system if subsidizing exports is not considered). However, we have to consider the case of countries that do not currently have any competitive advantages and the expected side effects of allowing agricultural development through sound agricultural policy.

Surpluses are not necessarily a problem and quantitative limitations on production are not necessarily relevant when surpluses are considered from a regional perspective for instance. Intra-regional trade therefore requires political consensus among countries as to which country has comparative advantages for a given production and could supply the region, which is not an easy task (see below).

#### **Box 8 : The Crucial Question of Cost Management**

The difficult transition from importer to exporter is illustrated by the cases of Indonesia, Zambia, Malawi, and the EU.

In **Indonesia**, Bulog has experienced a dramatic increase in its costs, especially when it has to manage surpluses (\$30 million US per year in 1969-1974, \$80 million in 1970-1984, then \$90 million in 1993-1994, and even \$200 million when export subsidies are included), which has almost lead it to bankruptcy. However, Bulog had access to financial reserves partly because of the increase in the price of oil. Moreover, rising costs (due to large stocks, subsidized exports when there were surpluses and subsidized imports when there were production deficits) led to reforms and adaptations by Bulog: reconsideration of the floor price, removal of fertilizer subsidies and the ceiling price announcements. In **Indonesia**, the policy option was to act on the relative prices of inputs and production.

In **Malawi**, it seems that because adjustments were not made in time, stocks accumulated, surpluses were exported at a loss, and the costs involved with the storage policy increased, putting the state in the position of not being able to provide price support in some remote areas.

**Zambia** benefited from revenues generated by copper.

In the **EU**, for some products surpluses were exported at subsidized prices that created unfair competition with producers based in importing countries. For sugar and milk, quantitative restrictions were combined with the price stabilization policy allowing supply management.

Similarly in Canada prices support is associated with production quotas targeting the national consumption level

In **Guinea**, potato surpluses can be exported to neighboring countries. In this case, exports tend to enhance a regional integration process, and can partially replace imported potatoes from other regions.

In **Brazil**, it seems that the program purchasing products from smallholder farms avoids the adverse effects of over production by limiting the amount of direct support per farmer and per year.

The question of cost management is also critical in situations other than surplus management. In **Mali**, for instance, the Office in charge of managing the intervention stock has had difficulties accessing financing. Two public buffer stocks exist in Mali, but none of them has proper financial capital: stocks managers have to search for credit before buying cereals. In a situation of rising prices, this implies both delays and a smaller scale of intervention, which ultimately undermines stocks' capacity to overcome price raises. This occurred in Mali during both the 2005 crisis and the 2008 crisis, when only 28,000 T and 53,000 T were able to be destocked, which was insufficient to really influence price levels.

This in-depth analysis of countries' experiences allows for the following recommendations to be formulated.

The ability to properly design policies and set a number of technical parameters is a key factor in ensuring the effective functioning of price stabilization policies. Their adequacy to the specific economic, social and institutional context of each country and each government's objectives, and the ability to foresee and adapt to changing contexts are key factors for success. This therefore requires high technical capacities and access to a large range of information and analyses. It is important to evaluate in advance the impacts of policies on the various types of households and possibly which sub-population to target.

Clear differentiation between long-term and short-term objectives and good understanding of substitution effects between products (which depend on the nutritional features of the products as well as food habits) are necessary. Pricing policies should be part of a coherent set of policies involving several instruments. Policies should accompany, but not replace, private operators. States should have the means to implement their policies, in particular sufficient financial resources and expertise to shape, implement and adjust actions.

### **3.2.2 Political and Institutional Factors**

Considering the processes by which policies are defined and implemented, different factors play a decisive role in the policies' ability to smooth food price volatility. The case studies led in different national contexts reveal that perverse effects can occur when policies:

- are not very effective,
- are not very predictable, and
- do not reflect a plurality of interests.

The **low effectiveness of policies** is a factor that can undermine policies results, particularly in low income countries characterized by weak state capacity and/or legitimacy. In these contexts, announced price policies tend not to be effectively implemented or to be by-passed by private actors (who are not punished for by-passing them). Indeed, the low effectiveness of policies can be attributed to either low financial capacities or low enforcement control. Financial capacities are a crucial determinant of policies' successes in the case of stock regulation, as seen above, and production enhancement measures, while enforcement control is a crucial determinant of policies' successes in the case of trade control. Drawing from the Malian case, Box 9 gives an illustration of the importance these factors can have in policies' results. The Mali example can be extended to other low income countries that either lack financial capacity and autonomy (dependency upon foreign aid) or can barely enforce the compliance with policies (corruption and by-passed policies). These situations call for recommendations in terms of State capacity building, and are consistent with the recommendations made by the Organization for Economic Cooperation and Development (OECD) and by the World Bank in "fragile states".

#### **Box 9 : Policy Effectiveness: Financial Capacities and Enforcement**

The **Malian** government implemented food price policies through trade control measures (export restrictions, import tariff wavers) and marketing measures (input subsidies, food security stocks). However, these measures did not always have the expected effects because of poor public financial capacities (see Box 8) and reduced enforcement.

During the 2005 and 2008 crises, exports were banned in Mali, but this decision was not respected by private operators who decided to export illegally across unsupervised borders or through informal agreements with customs officers. Due to a low capacity for enforcement and punishment, the government could not end these illegal exports and act upon price levels.

Other countries that do have proper and consequential financial capacities can, on the contrary, better ensure their policies' enforcement and control. This is the case, for example, in **Zambia** and Indonesia where the high public cost of regulating prices is respectively covered by revenues from the copper and petroleum industries. In Brazil, the implementation of a complex program such as the PAA was possible thanks to the State's strong administrative capacities and because the State devoted significant financial and human resources to the program.

The **low predictability of policies** is a second institutional factor that can undermine policies' ability to smooth food price volatility. This refers to the degree of transparency in the information the state provides on what policies have been decided. When this information is transparent, private actors can correctly anticipate state actions and take them into account in their own actions. However, when the information is not very transparent, private actors can hardly anticipate what the State's actions will be and may prefer to act as if policies were simply absent. This eviction effect is particularly strong in the case of trade control policies. Drawing from the cases of different East African countries, Box 10 illustrates the importance of policy predictability in determining policy results. These situations call for the encouragement of transparency in policy processes.

### Box 10 : Policy Predictability

Studies conducted in **Zambia, Kenya and Malawi** show that the volatility of maize prices was exacerbated by discretionary policies. The unpredictability of trade policies led to diminished interest by private actors in marketing and trade functions, and resulted in situations where prices fluctuated more than necessary. In Zambia, in 2001 and 2005, drought led to price fluctuations that were exacerbated by government interventions: the government advertized maize imports to contain rising prices, but publicly supported imports were arranged too late and uncertainties about the level and pricing of these imports limited private imports, resulting in very large increases. The story is similar in Malawi and Kenya. In Malawi, for example, exports were banned in 2006 and 2007, despite above average harvests, worsening maize prices situation for net maize sellers. In Kenya, in 2008, delays in government imports pushed maize prices higher and maize prices stayed at very high levels in late 2008 despite the tumbling of world prices (a state of emergency was declared in January 2009 and the import duty was finally lifted).

On the contrary, when policies are relatively transparent, private actors can anticipate public actions and position themselves in markets efficiently. **Madagascar**, with the running of the Rice Platform, is a good illustration of the positive influence predictable policies can have on price regulation.

The fact that *policies may not reflect a plurality of interests* is the third factor identified through the case studies that may undermine policies' results. In some countries, policies can be assimilated to the attribution of rents to a limited number of actors (Zambia for example, see Box 11), while in other countries policies seem to be more legitimate and are the result of dialogue and/or negotiation processes where different actors have the capacity to represent and defend their interests (Madagascar for example, see Box 11). These examples call for greater attention to the influence that private actors do indeed have in policy making processes. Recommendations should focus on the enhancement of transparent and pluralist systems of interest representation but they must take into account the capacity of actors to effectively represent and defend their interests in dialogue and negotiation arenas as well. In some cases, capacity building programs are needed to ensure actors participate in these policy making processes.

### Box 11 : Policy Appropriateness for a Plurality of Interests: Dialogue Processes as the Key ?

In **Zambia**, maize trade and marketing policies tend to benefit a small number of actors, and as a result their redistributive effect can be questioned. Pan-territorial prices benefit net seller producers only (and not to the smallest producers who are net buyers), and are strongly influenced by the Zambian National Producers Union. Import licenses are attributed selectively to industrial millers and traders, who tend to maintain close relationships with government officials. There are no official dialogue and negotiation arenas, and marketing and trade policies are defined in a way that is not transparent.

In **Madagascar**, rice marketing and trade policies have been discussed since 2005 within a "dialogue platform" where the different actors of rice sector are represented, and where market information is analyzed. Since then, domestic markets have stayed relatively calm in comparison with international markets. Guinea provides another positive example of when

discussions between actors led to the implementation of private measures that regulated the operation of potato markets.

In Brazil, the proactive participation of different stakeholders (farmers' cooperatives, enterprises, social control councils and committees, etc.) has been one of the reasons for the success of the Agriculture's Food Acquisition Program (PAA).

While the implementation of mutual information processes seems to be a promising innovation, accompanying policies aimed at strengthening actors' capacities have to be encouraged as well in order to help actors better define (expertise) and defend (negotiation) their interests.

Effectiveness, predictability, and appropriateness for a plurality of interests: these three factors influence policies' ability to lower food price volatility. The case studies led at national level highlight their influence, which depends on the political instruments considered (see the Table in Appendix 3).

At the regional scale, the experience in West Africa tends to demonstrate that these political and institutional factors are particularly critical for attaining the positive results expected from regional integration (see Box 12).

#### **Box 12 : Advantages and Limits of Regional Integration for Addressing Food Price Volatility**

Today, regional integration processes, which are seen as a powerful driver for development, tend to be growing stronger, particularly in Africa.

In theory, many advantages are expected from regional integration (De Melo, 1993; Hugon, 2005), which could be favorable for price volatility reduction compared to actions at the national and international levels. Here, one can mention a wider and more competitive market, economies of scale and better allocation of resources, a more stable and predictable institutional environment (national policies are "locked" within common policies, national lobbies are limited), standardization and "commoditization" of regionally exchanged products, reduction in transaction costs (due to geographical, socio-economical, and cultural proximity) compared to the international market, etc.

In West Africa, ECOWAS is currently reflecting on how to address food price volatility in the framework of its Common Agricultural Policy (ECOWAP). Reflection focuses on both common trade instruments (which is a fundamental part of regional integration and quite advanced), and regional cooperation to manage food security stocks and social transfers. Indeed, the regional dimension of food crises in West Africa, as illustrated in 2005, encourages countries to start building a regional approach to the management of food price peaks.

However, the economic heterogeneity of West African countries, the different sensitivity to imports (less for landlocked countries or the CFA franc zone), the divergent interests, differing points of view on trade, and the relative newness of the integration process make it difficult to see the advantages of regional integration. For instance, the Free Trade Liberalization Scheme adopted in 2004 is far from being effective (there are still many obstacles to trade within the region), and the finalization of a Common External Tariff is facing considerable difficulties.

## **The Desirability and Feasibility of Public Intervention at the National Level: Some Concluding Remarks**

The analysis of past and current experiences with market regulation reveals some encouraging successes and allows one to highlight some common features in these experiences. Management of agricultural price instability has to be part of a larger agricultural policy designed according to the specific context and objectives of the country in question. A wide range of instruments exists and combining these instruments in policy mixes is recommended. To avoid the excessive costs often linked to public intervention, instruments can be implemented by private operators under public supervision rather than exclusively by public actors.

All the problems faced by rural areas today will not be solved by market regulation. Other measures will be necessary, but reducing risk appears to be a condition for increasing labor productivity and incomes in poor areas. Measures aiming at improving market operation (information, discussion, standardization, etc.) as well as measures mitigating the negative effects of price volatility (such as social transfers) are complementary to market regulation. They will not be enough.

Some of the desired features of market regulation can be drawn from national/regional experiences. The desirability of price stabilization is highly dependent upon the general situation of each country, and policy design must be context-specific. If one seeks to replicate experiences, then many factors have to be considered, including the country's level of development, the proportion of the population in the agricultural sector, the external trade balance, the location of production areas, land distribution, transportation facilities, and the institutional and political contexts. Regulation has to be flexible, part of a broader agricultural policy that is constantly adapted to changing conditions in world markets and domestic production. This implies having a team of experts to analyze the situation and a wide range of information available.

Policy success in poor countries is highly dependant on the existence of productivity reserves. These reserves may come from technological innovation or better access to capital. The later can be obtained through the provision of public goods such as irrigation facilities or inputs subsidies. The problem is generally the cost of this kind of policy when public funds are scarce. In order to keep flexibility in the system, the policy should not aim at maintaining a completely fixed price. Rather, it should allow for a relatively wide and flexible band between floor and a ceiling prices in which the private sector can operate. This band has to be adapted over time in function of domestic and international conditions, which supposes extensive expert analyses. State interventions should be rules-based and relatively predictable; the stabilization agency should have flexible and sure access to financial resources. To be legitimate, the policy must consider the opposite interests of the actors involved, and has to be the result of discussions and negotiations among actors.

Collaboration between public and private actions seems very relevant. In particular, physical handling of commodities could be left to private firms, even if the latter receive

a State price guarantee. Private-public partnership could also be considered for storage: public actors (central states) would act as “project owner” and decide whether to buy or release stocks while private actors (banks, producers’ organizations) would act as “project supervisors” and sell or buy food and cover the financial cost of holding stock according to public decisions (contract between the State and private actors). This makes it possible to simultaneously solve two problems associated with public intervention: excessive commercialization costs and the eviction effect.

Price stabilization mechanisms (based on a price band defended through storage and imports under public supervision) or public contract farming (which guarantees prices for predetermined quantities attributed to peasants’ organizations) are efficient ways to stabilize prices. With the first option (price stabilization based on a price band), it is necessary to control external trade unless the price band is always included in the band defined by transfer costs from or to the international market. In this case, speculative attacks by the regulation agency are also avoided. If large fluctuations in international prices move the domestic band out of the band defined by transfer costs, trade regulations are necessary. This could be done by quantitative restrictions such as import licensing or variable tariffs, adjusted to maintain the domestic band within the larger band defined by transfer costs between the domestic and international markets.

With the second option (contract farming), controlling external trade is not necessary because the guaranteed price concerns only predetermined quantities of products. Another advantage of this solution is that it allows one to target specific categories of farmers.

However, the problem associated with quantitative measures is that they are often associated with bribery and rent-seeking behaviors. As stated above, some paths forward exist: rules-based, transparent public interventions combined with clear and prompt action against corruption, and capacity building ensuring that the different kind of actors are able to defend their interests may make it possible to define institutions and mechanisms to minimize these adverse effects.

It has to be noticed that the compatibility of such measures with WTO rules is not guaranteed. Price stabilization instruments such as buffer stocks or guaranteed prices should generally be lowered (they are included in the “amber box” of trade-distorting subsidies). Public stocks can only be maintained as part of a food security policy, and if they do not aim to support production through producer prices that are higher than international prices (see the WTO’s Agreement on Agriculture (AoA), Appendix 2). Structural stabilization instruments on import prices such as variable levies are strictly forbidden (AoA, Article 4:2), and import price bands have been challenged in the Dispute Settlement Body (the Argentina-Chile dispute). Only punctual measures such as the AoA’s Safeguard Clause (SGS) allow for the increasing of tariffs beyond bound rates. Moreover, since many developing countries under structural adjustment did not notify price stabilization and non ad-valorem protection instruments (e.g. specific customs duties, tariff-rate quotas, etc.), they are no longer allowed to introduce these

instruments. Many developing countries are also not allowed to use the SGS because they used ceiling tariff rates.

However, some flexibility exists for developing countries in the WTO arena, especially the least-developed countries. Customs duties can be modified since they remain below the bound level (this is very relevant for countries that have relatively high bound tariffs and are not subject to structural adjustment constraints). In addition, WTO rules are not fixed and the current negotiations, while they do not call into question the liberalization trend, offer an opening to get more policy space for the use of some instruments. Some (“small”) developing countries have used or still use non-WTO compatible instruments with nearly no risk of complaints. Finally, regions such as West Africa—if ECOWAS becomes a WTO member—are also little exposed to WTO complaints.

More market-friendly measures, such as the warehouse system or insurance, have the advantage of being clearly WTO compatible. However, they induce costs for farmers without significantly decreasing risks, and therefore do not seem to be as efficient as price stabilization mechanisms or contract farming.