Chapter 4. Public stockholding programs: what options for a permanent solution?

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>> Introduction

The use of public food stocks for food security purposes is a hotly debated topic in agricultural negotiations within the World Trade Organization (WTO) (see Díaz-Bonilla, 2014, 2017a and 2017b). That debate needs to consider both the legal standing of public food stocks under the WTO framework, but, also, the more substantive issue of whether those instruments make sense in economic terms, particularly whether they are the best option to achieve food security. In this chapter I discuss briefly both aspects, starting with the economic considerations and then moving on to legal issues (a more detailed discussion of both topics can be found in Díaz-Bonilla, 2013, 2014, 2017a and 2017b).

>> Economic Considerations

NATIONAL ASPECTS

A common operational problem for food stocks is that they lack clear objectives or have multiple and sometimes conflicting objectives (NEPAD, 2004; Dorosh, 2009). Those objectives may include coping with emergencies, helping populations suffering from chronic hunger, stabilizing prices for producers at profitable levels, and providing food to urban populations at prices that are stable and affordable. Such a variety of objectives can result in food stocks of an inadequate size (too high or too low), confusing decision-making and management structures that are prone to political interference and short-term horizons, high costs and operational inefficiencies, and inappropriate levels of funding and misallocation of resources. A basic starting point, therefore, is to properly define the problem that the food stocks try to solve, which leads to the consideration of the three categories of public food stocks discussed below (Díaz-Bonilla, 2017a; NEPAD, 2004; World Bank, 2005 and 2012).

Table 1 lists different objectives for the use of public food security stocks (PFSS) linked to food security concerns (in terms of the usual components of availability, access, utilization, and stability), plus a more general objective of macroeconomic stability in the left column, and a summary of potential policy instruments in the right column.

The question a policy maker must ask is: given the desired objective (or objectives), is PFSS the best policy instrument or are there other potentially better interventions?

The first objective is related to food availability in emergencies. Emergency food stocks try to cope with natural disasters and other disruptions in the domestic or international food supply. These stocks are usually small and are supposed to bridge the supply gap until the arrival of commercial supplies or food aid. Hazell (1993) suggests that relatively small percentages of total consumption (which he estimates at 5 percent of total consumption in the case of SSA countries) may suffice to act as an insurance mechanism. Other estimates are higher: for instance, NEPAD (2004) calculates that such stocks should be able to cover two to three months of consumption, which amounts to 17–25 percent of total consumption.

TABLE 1: National Economic Objectives and Possible Instruments

Objectives	Instruments: are public food security stocks (PFSS) the only (or best) ones?
1. Food Security: Availability in emergencies	1.Emergency food stocks, but also private stocks, food aid, trade, financial facilities...
2. Food Security: Access through the operation of national safety nets	2.Public stocks to supply food distribution programs, but also food stamps, cash transfers…
3. Food Security: Stability. Price stabilization (different meanings). Food policy dilemma: high/low prices	3.Buffer stocks (different types), but also private stocks, trade, macroeconomic policies. Incomes and poverty?
4. Food Security: Utilization. Nutritional aspects	4.PFSS appear "cereal focused." Bad for dietary diversity and adequate nutrition?
5. Macroeconomic stabilization	5.Unusual that 1 or 2 food prices affect macroeconomy (Indonesia, an exception?); other factors more relevant, e.g exchange rate. Reverse causality: fiscal/macro crises

Source: Author

However, PFSS are not the only possible instruments, because availability can be ensured by private food stocks, food aid, trade, and financial facilities.

The next objective (food access) can be addressed by a second type of PFSS that may be called food redistribution stocks: they serve as a rotating stock that backs up the distribution of food through a variety of programs. For instance, they can include targeted safety nets to help the poor and vulnerable, school lunch programs, supplementary feeding programs for women and children, food-for-work (FFW) schemes, semi-targeted public distribution systems (such as fair price shops and ration shops) or even non-targeted public systems (although this option has been generally discontinued because of its high cost). Food redistribution stocks may also be used like the previous type of food stocks to cover emergencies, such as natural disasters, that disrupt food supply.

Food redistribution stocks are typically bigger than emergency stocks (mentioned in the first objective), depending on the coverage and scope of the food distribution system of which they are a component. For instance, India's Targeted Public Distribution System (TPDS) is the largest food system of this type in the world (Dorosh, 2008). Even before India's National Food Security Act of 2011was expanded and revised in 2013, the TPDS had reached some 600 million food-vulnerable or undernourished people. With the new Law, the coverage has been increased further to about 800 million people. Such a large system obviously requires large inventories; to achieve these inventories, the government has purchased annually up to one-third of the wheat and rice produced in the country in recent years (Hoda and Gulati, 2013).

Again, there may be other instruments such as food stamps, cash transfers, and so on, that can achieve the desired objective of facilitating food access without resorting to PFSS. For poor consumers, it may be more efficient to use cash transfers or food vouchers and to let the private sector manage the physical handling of food product (see Hoddinott et al., 2013). Some nongovernmental organizations have argued that managing cash transfers or food vouchers is far more cumbersome than the physical distribution of the food items, but this argument appears largely incorrect. If the government has a system to identify poor households and to distribute the physical product, it can do the same with food vouchers.

The administrative costs and the possibility for corruption and misallocation may be similar in both schemes; with food vouchers, however, the government avoids losses stemming from handling the grain through bureaucratic structures. Of course, those public losses need to be compared with the ones affecting potentially ineffective and underdeveloped private sector channels supplying the food bought with vouchers. The other challenge stems from the possibility of abuse of market position by private sector operators, which must be compared with the possibility of corruption and abuse by the public staff operating governmental schemes. And finally, there is still the issue of how to ensure the physical delivery of food products to isolated areas, which cannot be guaranteed by simply handing out vouchers. The expansion of a private sector delivery network is something that evolves along with general economic development and supportive government policies. In this context, the question of whether the government or the private sector is better equipped to handle physical distribution becomes an empirical issue.

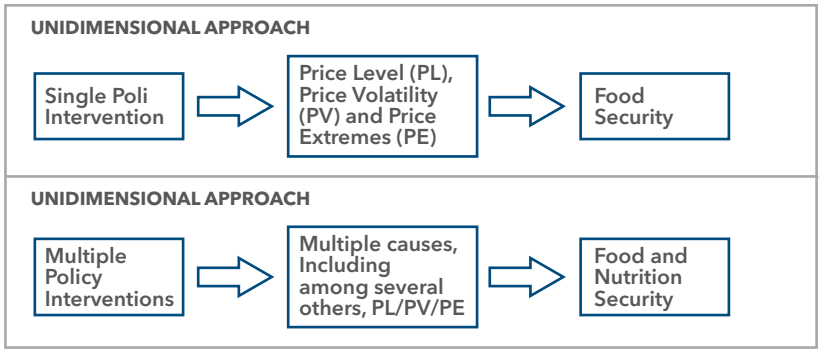
The third objective is related to price stabilization, which has different meanings. Stabilization stocks (a third type of PFSS) differ in their definition of price targets (i.e., single price, symmetric price bands of different widths, and extreme values). If the real objective of the food stock program is price stabilization (as opposed to subsidizing producers with above-market prices or taxing them with below-market prices), then the target levels for single prices or for price bands should be updated to track mean trend values over the period of stabilization, such as a three-to-five year rolling average (Timmer, 1989). However, historical examples show that these stabilization stocks tend to drift into subsidized price support to producers, to the detriment of consumers and taxpayers, or into taxing producers with low prices to help consumers.

Analyses of the welfare effects of price stabilization have generally found small positive effects for consumers (Gouel, 2013), as well as some small efficiency gains for producers (World Bank, 2005), but usually with significant fiscal costs, which may lead to macroeconomic instability. Furthermore, as in the case of the previous objectives, PFSS are not the only instruments; other approaches, such as private stocks, and trade and macroeconomic policies, are very important for price stabilization.

In addition, it must be noted that prices are not the only variable impacting food security, nor are they even always the main one. At the same time, many different policy instruments, not just public food stocks, affect the level and volatility of prices. Therefore, a unidimensional approach that only considers the link from food stocks to price stability to food security would be highly constraining (Chart 1). In fact, it is important to consider all dimensions of income generation and of poverty drivers, and not only food prices (Díaz-Bonilla, 2015).

The four objective is related to utilization and the associated nutritional aspects. The world now suffers from a *"triple burden"* of malnutrition (Pinstrup-Andersen, 2007): under-nutrition, the traditional focus on insufficiencies in calories and proteins (hunger); macro and micronutrient deficiency (sometimes called *"hidden hunger"*); and over-nutrition, particularly the overconsumption of fat, sugar, and salt, leading to problems of obesity, diabetes, and cardiovascular disease. The triple burden of malnutrition should be considered when analyzing food security stocks. For instance, a food security program centered on a limited number of products selected mainly because of their calorie content will not address the fact that a lack of dietary diversity appears more correlated with the prevalence of child stunting and wasting and with underweight mothers than simply the average of consumption calories (Arimond and Ruel, 2006).

CHART 1: Unidimensional versus multidimensional policy approaches



Díaz-Bonilla, 2015

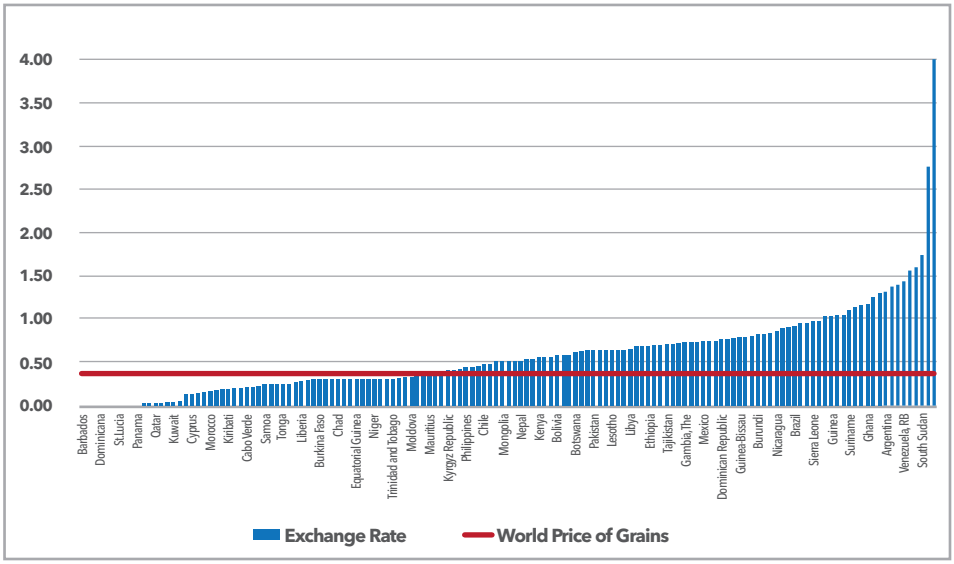
More generally, changes in consumption patterns linked to increasing incomes in developing countries, which have led to the expanded use of products other than the usual staple crops considered in food security stocks, bring the limited focus of these programs into question (see, for example, Hoda and Gulati [2013], who criticize India's National Food Security Act of 2013 for being *"cereal centered"*). In summary, the usual PFSS that operate with two or three *"food security products"* because of their calorie content, would be bad for dietary diversity and for adequate nutrition.

The fifth objective goes beyond the four components of food security and takes a macroeconomic view. For instance, Indonesia in the 1980s and perhaps 1990s has been considered a positive example of price stabilization that led to greater macroeconomic stability as well (Timmer, 1989 and 2013). However, the example of this country is based on a product that is storable (rice) and that in the 1980s represented around 56 percent of the calories and 53 percent of the proteins consumed; more recently, in the early 2010s, that product still represents, respectively, close to 48 percent of the calories and 40 percent of the proteins consumed in Indonesia on average (according to the food balance sheets shown in FAO/FAOSTAT, 2014). On the other hand, many developing countries in Africa, Asia and Latin America and the Caribbean have a more diversified structure and/or depend on products (such as cassava and yams) that are difficult and/or costly to store, making the example of Indonesia less applicable.

Therefore, except for the decreasing number of countries in which a significant proportion of calories and nutrients depends on only one or two products, episodes of food price inflation and upward price spikes, are associated with a larger basket of goods, and building a PFSS that includes all of them would be very costly and difficult to operate. More to the point, when food price inflation or spikes occur, they are generally related to macroeconomic imbalances, such as fiscal deficits (to which badly managed PFSS may contribute). Thus, food security stocks may not have the product breadth to address broad price inflation, and may in fact contribute to creating macroeconomic imbalances through high fiscal costs.

For instance, Chart 2 shows that volatility in the exchange rates in a large number of developing countries is far more than volatility in the prices of cereals in world markets, showing the importance of macroeconomic causes, which cannot be addressed by PFSS, and may actually be worsened by badly managed schemes.

CHART 2: Volatility (1980-2016): Exchange Rates and World Price of Grains



Source: Author, based on data from the World Development Indicators of the World Bank, and from the commodity price database of the IMF

In summary, emergency and redistributive food stocks can play an important role in food security arrangements. However, carrying stocks as an insurance mechanism or as a component of safety nets is different from using stocks to stabilize domestic grain prices, which, as noted, usually requires larger stocks and which may be expensive and have a history of failures. Although it has been argued that some stabilization schemes seem to have worked better in Asia, the same cannot be said about many of the stabilizing schemes used in African countries (see Galtier and Vindel, 2013; NEPAD, 2004). This last observation coincides with the findings in Minot (2011 and 2012) about the destabilizing effects of domestic policies in several SSA countries. Developing countries in LAC, which tend to have relatively diversified diets and more developed private systems for food processing and distribution, have in general moved away from public food stocks and have linked their domestic food programs to general safety nets, mostly using cash transfers.

As discussed later, neither emergency stocks nor food redistribution stocks should conflict with WTO disciplines if the products are purchased at market prices (I returned to this aspect below). Some countries and observers have argued that buying at market prices would be ineffective to help with food security. This seems mistaken. Certainly, to build food security stocks for emergencies and to provide domestic food aid for poor consumers, governments in developing countries would be far better off financially if they bought at market prices (especially in a context of high food prices). For poor countries, it does not make sense to add to the costs of the food security program by using above-market administered prices, which generate further losses through buying high to support farmers and selling low to subsidize consumers. On the other hand, conducting the operations at market price, will ensure that the program is part of the domestic support allowed under the Agreement on Agriculture.

If the objective is to help poor producers, there are better instruments than buying some products above the prevailing market price, which would ensure that the subsidy goes to larger producers that have more product to sell. Rather, it is far better to use safety nets for poverty reasons, considering that providing income support to poor producers goes directly to the heart of the matter[31]. If a country wants to help its poor and vulnerable populations, then targeting crops or livestock production is an indirect, and many times inefficient and inequitable, way to achieve poverty reduction and food security. When food security concerns are invoked, the focus of the policy analysis should be on people rather than on crops or food products.

Still, it is important to note that even when purchases are made at market prices, the program would nonetheless offer some support to farmers (Islam and Thomas, 1996). This impact is reinforced if the food stocks are utilized annually and rotated as part of social safety nets or other public systems of food distribution targeting the poor and needy. This type of redistributive program expands *"effective demand"* (that is, demand backed by purchasing power, in this case intermediated by government purchases) and leads to higher prices for producers than would have been the case otherwise. Although this cost would be borne by those consumers who do not receive food aid and by the taxpayers, it would allow poor people to attain higher levels of food consumption.

It should be further noted that even without the government having to physically purchase food and distribute food aid, an income-redistribution program with discounted food vouchers for poor consumers would also lead to higher demand and therefore higher prices for farmers when compared with the counterfactual of no program[32]. Of course, this assertion depends on the existence of a private sector that can adequately cover the national territory, that operates reasonably efficiently (that is, there are no large losses in the physical handling of the products), and that behaves competitively along the procurement and marketing chain. In this situation, the comparison is between the quality and efficiency of the coverage, efficiency, and competitive behavior of the private sector, on one hand, and the performance of the public bureaucracy distributing food, on the other.

INTERNATIONAL ASPECTS

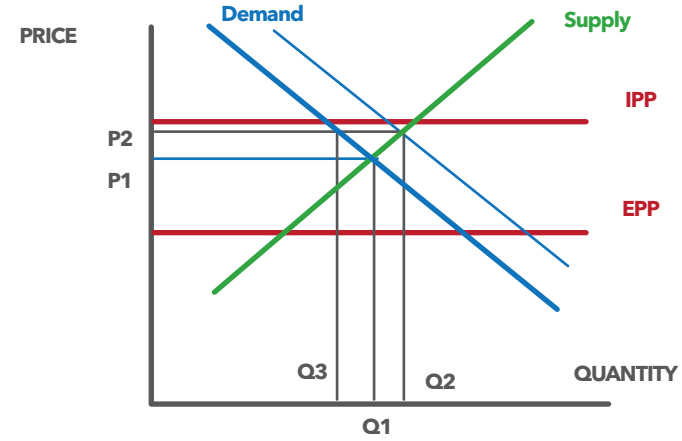
Chart 3 shows the case of a country that the market conditions for a product without government interventions are such that the domestic price (P1) is within the import parity price (IPP) and the export parity price (EPP)[33]. If so, the country will not export nor import that product, and it will consume Q1 of the product.

31 This is another application of the Bhagwati rule (see Díaz-Bonilla 2015), regarding the need to target policies as closely as possible to the source of the problem in order to prevent second-round problems that may occur if the policy focuses only on a proxy.

32 In the case of the United States, the political economy of the series of Farm Bills has always featured the alliance of farmers and social advocates who support food vouchers and similar redistributive programs. That alliance was maintained in the 2014 Farm Bill (Orden 2014).

33 The calculation of IPPs and EPPs may include import and export border measures and instruments allowed to the country under its agreements within the WTO. Those measures would be market access issues that are considered separately from the domestic support interventions discussed here.

CHART 3



Source: Author

Now assume that the country buys domestically a *"food security product"* to build the PFSS for any of the reasons mentioned before. Now the domestic demand shifts to the right, increasing the domestic price (P2), increasing supply to Q2 and reducing demand to Q3. I am assuming that the government accumulates the difference (Q2 - Q3) in the PFSS, but that the domestic price does not go above the IPP. Then, the international repercussions depend on what does the government do with the quantity accumulated in the PFSS. In some scenarios, the PFSS even if increasing the domestic price would not affect international markets of that product. For instance, the accumulated product may be distributed to the poor who would not have been able to purchase it otherwise. Also, the stocks may get spoiled in the public silos (which would a very inefficient way of generating an internal transfer from consumers to producers).

On the other hand, if the country decides to export the accumulated product, it would need export subsidies to do so, negatively affecting other countries. Also, the public acquisition price may go above the IPP, which would require the country to use other trade measures to limit imports, affecting exporters. Finally, the accumulation of stocks per se may affect markets (but the impact may be minor if the volumes involved are also small).

Of course, besides these partial equilibrium effects, there will be general equilibrium ramifications, resulting from the complex interaction of changes in income and relative prices for a variety of goods. A relatively obvious effect would be that, because the product bought by the PFSS is now more expensive in the domestic market, then imports of substitute goods may increase. Other general equilibrium effects may be far more complex.

Chart 4 shows the examples of India and China in relation to the domestic and border prices of three products: wheat, rice, and maize.

CHART 4: Reference and Producer Prices (database Ag-incentives.org)

Source: Calculations from the Author based on the database Ag-Incentives.org

India seems to have been operating mainly below the IPP for those products, but accumulated large reserves and ended up exporting part of the wheat and rice stocks. China, on the other hand, has set prices above the IPP, and then had to use additional border measures to control imports.

In summary, it seems important to understand whether a country is operating within the IPP-EPP band and what the government may do with the quantity bought. This should be kept in mind when discussing the legal options under the WTO in the next section. If a country is within the band, and the quantity accumulated goes to help the poor (which otherwise would not have been able to buy it), or the effect is a simple redistribution of costs and benefits within the domestic economy without international repercussion, then the operation of the PFSS should not, in principle, be an issue for trade negotiations. On the other hand, if the operation of the PFSS leads to subsidized exports or border measures to control imports, then those impacts are relevant for the WTO negotiations.

>> Legal Issues

BACKGROUND

The debate about PFSS before and during the Bali Ministerial (2013) revolved around two sections of Annex 2 of the AoA (Green Box): food security stocks (AoA, Annex 2, paragraph 3) and domestic food subsidies (AoA, Annex 2, paragraph 4). Prior to that Ministerial, a group of developing countries (known at the WTO as the G-33) presented a proposal based on the 2008 Modalities that included new language for paragraph 3 (Public Stockholding for Food Security Purposes) and paragraph 4 (Domestic Food Aid). The details of the legal debate and possible solutions are in Díaz-Bonilla, 2014, 2017b, and Glauber, 2016.

The main legal points to consider are:

First, the Agreement on Agriculture allows the creation of public food stocks for food security reasons under Annex 2, if they are built by buying at market prices and follow some other conditions (see Díaz-Bonilla 2017b). They can also be built by buying at *"administered prices"* (i.e. government prices presumably not in line with market prices), but in that case the difference between that administered price (AP) and the fixed external reference price (FERP) (which for countries that were part of the creation of the WTO in 1994 is the average 1986-1988), has to be multiplied by the quantity eligible to receive that support and that value counted as distorting domestic support and compared to the allowed amount of such support (which for many developing countries is only the 10% *de minimis*).

It is important to note three crucial concepts – the fixed external reference price (FERP), the applied administered price (AP), and the eligible production – because they feature prominently in the legal discussions.

Second, some developing countries, particularly India, believed that if they had to account for the gap between administered prices and fixed external reference prices, they would bump against, and probably exceed, the domestic support allowable under the WTO in some key products (which for most of those countries is the product-specific limit of 10% de minimis of total production)[34]. Further, they argued that, given the increases in international prices during the last years, it did not make sense to compare buying prices to the external reference prices that, for most WTO members, were defined under the AoA as those prevailing in 1986–1988. In fact, if purchases were made at administered prices that closely tracked current world prices (and therefore would not be distortionary in an economic sense), the AoA comparison with the 1986–1988 values would still show (largely imaginary) margins of market price support.

Based on these concerns, the language proposed by the G-33 exempted the difference between administered prices and the FERPs from the obligation of being included in the AMS when developing country governments have purchased products for food security stocks (paragraph 3) and domestic aid (paragraph 4) from a specific type of producer –that is, those that are *"low income or resource poor"* (LIRP; this category is already considered by the AoA for some special treatment in Article 6.2).

This approach generated two basic objections. First, it appeared to go against the conditions established for the Green Box (Annex 2, paragraph 1), particularly the second basic criteria (point b), which indicates that *"the support in question shall not have the effect of providing price support"* (Annex 2, paragraph 1). The G-33 proposal clearly led to the provision of price support, at least to a certain type of producer; therefore, there was the fear that once a loophole was created in the Green Box general criteria and conditions, anything could happen with the rest of the programs listed there. Furthermore, other developing countries were concerned about the leeway already granted under the current Annex 2 to provide income support that is, in theory (but not clearly in fact), decoupled from prices. According to this objection, offering price support to LIRP producers would significantly undermine the possibility of disciplining those other Green Box measures which are currently used mostly by industrialized countries[35] and which may create more than minimal trade distortions.

Third, some countries worried that the stocks allegedly accumulated for food security reasons would end up being sold abroad, affecting their own domestic or export markets. WTO members that provide price support to LIRP producers could potentially accumulate products in excess of domestic consumption and then decide to sell those surpluses in external markets to help finance the program's fiscal cost. In fact, during 2011-2012 and 2012-2013, about 20 percent of Indian wheat exports were drawn from public stocks (Dorosh and Rashid, 2012).

Those debates led to an interim solution (the *"peace clause"*) at Bali (Bali Ministerial Decision (WT/MIN(13)/W/10), which was clarified and changed by the Decision at the General Council of November 2014 (WT/L/939), and ratified by the Ministerial Decision at Nairobi in 2015 (WT/MIN(15)/44 – WT/L/979). The peace clause is the current status quo. It protects developing countries that were operating PFSS, even if buying through administered prices, from challenges in the dispute settlement mechanism of the WTO under the AoA (although they may be challenged under the Agreement on Subsidies and Countervailing Measures). WTO developing members that want to be protected by the peace clause face more stringent notification and transparency requirements regarding domestic support, forcing those that are extremely behind schedule in their notifications to become current in their obligations under the AoA. This requirement will facilitate closer scrutiny and monitoring of the different programs of domestic support in the countries using this interim solution (for more details about the peace clause, see Díaz-Bonilla, 2014 and 2017b). The decisions mentioned before also committed countries to find a permanent solution, which is the topic briefly discussed immediately.

34 This limit does not affect other options, such as the rest of the Green Box measures, Blue Box measures of support, and, for developing countries only, those considered in Article 6.2.

35 Some developing countries, such as China, have been fast increasing the use of that type of support.

POSSIBLE PERMANENT SOLUTIONS

Several possible permanent solutions have been discussed (for a full review see Díaz-Bonilla 2014 and 2017b; Glauber 2016).

The first point to be noticed is that developing countries can provide domestic food aid to consumers out of PFSS (Annex 2, paragraph 4). The question is procurement prices from producers. The best way of avoiding WTO problems is to buy at market prices; this approach is compliant with Annex 2, paragraph 3 of the AoA. The United States, Brazil, and other countries do buy food for their domestic food security programs at market prices. It also makes sense in terms of fiscal account: buying at market prices will not further increase the program's procurement costs (though other operational costs and the sales subsidy still remain). In addition, as in Brazil, some percentage of the food purchased must come from small farmers as defined in national legislation (Krivonos, 2013), which is one of the aspects highlighted by the G-33's original proposal.

Other options include (see Díaz-Bonilla, 2017b):

- **i.** Provide indicative prices, use allowable trade measures to guide prices, but still buy at market prices.
- **ii.** Provide indicative prices, buy at market prices, and offer income support to producers using Annex 4 of the AoA (Equivalent Measure of Support, EMS), when market price support exists *"but for which calculation of this component of the AMS is not practicable."* However, it may be difficult to show why that calculation *"is not practicable."*
- **iii.** Define *"eligible production"* in a way that focuses more closely on quantities actually bought following the Korean Beef case (WTO, 2000a). But the actual trade impact of such approach has to be analyzed. There is also the related suggestion of excluding self-consumption from the eligible quantity.
- **iv.** Define the FERP in US dollars or even in Special Drawing Rights. This approach hinges on the discussion about what does it mean that the price is *"fixed"* and whether the calculations have been done *"in accordance"* with Annex 3 and *"taking into account"* constituent data and methodology in original schedule.
- **v.** Change the 1986-1988 FERPs to more current prices. However, changing the FERPs would open an entirely new set of difficult issues (such as the valuation of the commitments by countries with declared domestic support in the base year).
- **vi.** Consider adjustment by inflation, perhaps applying art. 18.4 of the AoA. But that article refers to what the Committee on Agriculture can take into consideration, not what countries can do to adjust their calculations. However, the fact that there are some examples of the Aggregate Measure of Support in constant domestic prices, may lead to more debate about this option.
- **vii.** Exempt those operations that are smaller than some percentage (to be defined) of domestic production, or of global trade in that commodity.
- **viii.** Exempt LDCs. But if food security is the problem, there are non-LDC countries whose profiles are similar to those of other food insecure countries (see for instance, Díaz-Bonilla and Thomas, 2016).
- **ix.** Clarify the link between *"administered prices"* and *"market prices"* (Díaz-Bonilla, 2013, 2017b) and keep administered prices within the IPP-EPP band. Countries may be rebuttably presumed in compliance of not providing price support if, both administered prices track domestic market prices or, at least are below import parity prices and there are no exports from the PFSS. If exports take place from PFSS (directly or indirectly) (other than those that may be mandated by a global emergency as determined by the appropriate UN agencies), then the PFSS would not be considered a *"food security"* stock, and the domestic support will have to

be calculated according to current rules (possibly leading to challenges under the AoA if it exceeds the allowed limits).

x. Transform the interim solution into a permanent one under the AoA, and extend it to all developing countries. Keep all the information requirements of the current *"peace clause."* But, conceivably, if the PFSS offers domestic support in excess of the country's allowed limits, the practice may be challenged under the Agreement on Subsidies and Countervailing Measures (ASCM) (Glauber, 2016).

Carefully defining *"eligible production"* (perhaps by capping the percentage of production to be bought, by restricting purchases to come only from a certain type of producer, such as LIRP ones, or by other similar approaches) and allowing the FERP to be defined in US dollars (or a basket of currencies, such as the SDRs) may go a long way toward preventing developing countries from exceeding the *de minimis*. This is a combination of (iii) and (iv). It would allow distorting domestic support, but within the limits currently allowed by the WTO.

The proposal more adequate to avoid trade distortions and or to discipline them through de the WTO dispute settlement mechanism are (ix) (Díaz-Bonilla 2013 and 2017a) and (x) (Glauber, 2016). The first one would force PFSS to operate within their IPP-EPP band. The second one, would have some similar economic effects, to the extent that operating outside the IPP-EPP band could lead to challenges under the ASCM (in Díaz-Bonilla 2013, and 2017b, the country could also be challenged under the AoA).

>> Conclusion

Even if a permanent solution is found under the WTO legal framework, that would not necessarily be the main issue regarding whether the use of public food stocks is an appropriate approach to solve food security concerns in developing countries. Economic and operational considerations (as discussed in the first section of this paper, and in greater detail in Díaz-Bonilla, 2017a), are more relevant for food security in poor countries than legal issues.

Overall, in developing countries, the most important constraints to designing and implementing adequate trade and non-trade policies to ensure food security continue to be the limitations of those countries' financial, human resources and institutional capabilities. It must also be remembered that general trade policies are not necessarily the main factor affecting food security and that, in any case, trade policies are blunt instruments with which to address the challenges of poverty and hunger. Therefore, special and differential treatment defined at the national and crop level may not focus on the main problem; rather, it is important to have well-targeted safety nets for the poor, both consumers and producers.

Turning specifically to food security stocks, several economic and operational issues do merit analysis. In line with other analyses, this paper distinguished food stocks for emergencies (type 1) and redistribution (type 2) from stocks for price stabilization (type 3). Based on a country's conditions, emergency and food redistribution stocks (types 1 and 2) may help to achieve food security objectives. Governments of landlocked countries, which have a consumption pattern concentrated on a limited number of food products that are less perishable and which suffer from difficult access to international markets, may find it necessary to maintain food security stocks to help prevent potential breakdowns in supply. If that food is procured domestically, those purchases, well-timed at

harvest, will provide some price support for farmers, even if those purchases follow prevailing market prices.

Depending on the conditions prevalent in the country, a food redistribution stock (type 2) could also be a useful component of a country's social safety nets and targeted food programs. It is important to have such safety nets (conditional cash transfers, nutritional programs for women and children, school lunches, food-for-work programs, and so on) in place so that they can be scaled up if and when sharp upward price spikes, or other events that disrupt food supply, occur. But again, buying at market prices is the best option with which to build these stocks because if a developing country is buying food above market prices to provide farmers with high price support and selling below market prices to help poor and vulnerable populations, it will most likely get into severe fiscal problems long before other WTO members consider the possibility of bringing a trade case against that country. Along with the extension of safety nets for poor consumers, governments should also consider safety nets for poor and vulnerable agricultural producers; these safety nets could provide income support for poverty reasons, and may be scaled up in emergencies such as when harvests fail or in the case of sharp downward price spikes.

This chapter also notes that food stocks for emergency purposes and those that operate as redistributive devices backing up safety nets and other targeted food aid programs, if purchased domestically, expand domestic food demand and support prices for producers, as compared with the cases where no such program exist.

The challenge posed by the triple burden of malnutrition was also discussed. Recent studies show that increases in dietary diversity, not in calorie availability, are more closely related to declines in stunting and wasting in children and underweight in mothers. Thus, food security stocks based on a limited number of staple crops, usually selected only for their calorie content, may not be the best approach for tackling the multiple challenges of malnutrition. Also, food price inflation and price extremes would be better managed by macroeconomic, trade, and investment policies, combined with safety nets that supplement the incomes of the poor.

If public food stocks are built, they must operate with clear objectives and decision-making rules, as well as with strong financial, accounting, and audit safeguards. They should also be adequately sized and properly located (with the necessary transport, storage, and communications infrastructure). Finally, there should be adequate funding arrangements with properly trained staff (NEPAD, 2004; World Bank, 2005 and 2012).

Whatever type of public food stocks is implemented, it will be important to consider additional policies, such as credible early warning and food security information systems about harvest prospects, potential food shortages, and emergency needs. In addition, governments should embed the operation of stocks in an integrated policy framework for food security. This framework should consider a full array of policies that support production, ensure market development, invest in infrastructure (transport, storage, and communications), help farmers and farmer associations create and expand their own stock-holding facilities (including traditional on-farm options) through warehouse receipts and credit, adequately use trade to enhance food security, expand safety nets for the poor and vulnerable, and avoid ad hoc policy interventions (NEPAD, 2004). In addition, the integrated policy framework must also include other components—from overall good governance and macroeconomic stability, to different types of infrastructure and social investments, to programs supporting women's empowerment and community organization and participation.

The debate about the treatment of public food stocks within the WTO legal framework is an important component of the negotiations towards the WTO Ministerial in Buenos Aires in December 2017. This debate will require full consideration of the legal, economic, and diplomatic issues involved, some of which were briefly discussed here.

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