

The need to correct WTO rules on public stocks¹

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The question of public stockholding for food security will be at the center of the next WTO negotiations in Bali in December 2013. Broadly speaking, two approaches (which are not mutually exclusive) have been proposed. The first one is to add flexibility for individual countries that are at risk of exceeding their Amber Box limits: under specific threshold conditions, countries would be allowed to build food reserves even if it implies that their domestic support for agriculture exceeds their Aggregate Measurement of Support (AMS) bound level. This approach has been developed in the framework of “Question 4” in the list of four questions presented to negotiators by the chairperson of the agriculture negotiations (New Zealand’s ambassador, John Adank).²

The second approach is more ambitious. It aims to modify the rules used to calculate the contribution of public stocks to AMS. The G33 proposal on stock holding is along these lines: it says the “acquisition of stocks of foodstuffs by developing country Members with the objective of supporting low-income or resource-poor producers shall not be required to be accounted for in the AMS”. More generally, this second approach includes the debates around “Question 3” on Ambassador Adank’s list.

Each approach has given rise to lively debates among WTO members.

The present note aims to provide a first step toward a consensus by focusing on a technical issue: showing that current WTO rules strongly overestimate the real subsidies to agriculture provided by public stocks and correcting the rules accordingly. This discussion should be straightforward as it concerns a technical matter (correcting errors in the AMS calculation) rather than a change in the scope or intent of the rules. After explaining how developing country governments use public stocks for food security purposes (section 1), we will consider current WTO rules on public stocks and explain why they overestimate the level of domestic support for agriculture that is actually provided by public stocks (section 2). We will then propose new rules that correct the biases of the current rules and would therefore allow the AMS calculation to align with a more accurate measure of the contribution public stocks make to domestic support for agriculture (section 3). We will close by showing what the consequences would be of maintaining unchanged the WTO rules on public stocks (section 4).

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² More on the four questions can be found here:

http://www.wto.org/english/news_e/news13_e/agng_18jul13_e.htm#q4.

1. How governments are using public stocks for food security purposes

Many developing countries (DCs) use public stocks to protect their farmers and consumers from large decreases and increases in prices, especially for basic food products, such as grains. In order to protect farmers when the price decreases too much, the public stock buys grains to remove the surplus from the market and hold the price above a predefined floor. The DC governments use price floors in their efforts to stimulate agricultural investment, increase yields and labor productivity, and reduce the cost of food. Symmetrically, when the price of grains increases too much, the public stock releases part of its stocks on the market, to compensate for supply shortfalls and hold the price below a predefined ceiling. The objective of the price ceiling is to protect consumers. In many DCs, grains prices are very unstable, while grains account for a substantial proportion of household expenditures and provide most of the calories in the diet for a large proportion of the population (*cf.* graph 1 and table 1 in the annex for an example). In some occasions, public stocks' purchases and sales are targeted (restricted to some categories of producers and consumers).

2. Why current WTO rules on public stocks significantly overestimate the domestic support to agriculture

Purchases for public stocks are included in the Aggregate Measurement of Support (AMS). The AMS is capped by the WTO Agreement on Agriculture (AoA), often at a low level for DCs because they almost always had a low level of AMS spending when they signed the AoA. The contribution of public stocks to AMS is calculated by using the following formula:

$$C = (P_p - P_r) \cdot Q$$

with:

P_p = Purchase price of public stocks

P_r = Price used as a reference

Q = Quantity

The current way to calculate the contribution of public stocks to AMS is biased. It strongly overestimates the real support provided to farmers through public stocks. There are three reasons for this:

1. P_r (the reference price) is currently defined as « based on the years 1986 to 1988 and shall generally be the average f.o.b. unit value for the basic agricultural product concerned in a net exporting country and the average c.i.f. unit value for the basic agricultural product concerned in a net importing country in the base period » (Agreement on Agriculture, Annex 3, article 9). As grain prices in 1986-1988 were much lower than they are now, purchases for public stocks are considered as support, even if the purchases are made at the current market price!
2. Q (the quantity) is « the quantity of production eligible to receive the applied administered price » (Agreement on Agriculture, Annex 3, article 8). There are currently many different interpretations of what « the quantity of production eligible » actually means. Some countries notify the whole national production, while others notify only the procured

quantity. The WTO website, however, is clear that “eligible production” means national production, not just the amount procured for public stocks (see an example of the calculation: http://www.wto.org/english/tratop_e/agric_e/ag_intro03_domestic_e.htm).

The rationale behind this approach relies on the implicit assumption that the procurement price makes the market price and, by this way, benefits each unit produced in the country, even if it is not purchased by the stock holding authorities. In many DCs, however, the weight of self-consumption is large and only a small part of total production is marketed (for example, less than 20% of millet and sorghum produced in the Sahel region goes to market). It is therefore unfair to include all the quantity produced in calculating the AMS. Moreover, in many countries, public stocks buy only a small percentage of marketed production, making the effect on market prices small. Public stock purchases are usually also time-limited (they last just a few weeks or months, depending on the context, and only rarely are year-round).

3. Sales by public stocks are not taken into account, although they may act as taxes on farmers (exactly in the same way as purchases can act as subsidies). If a country stabilizes grain prices around its mid-term trend value (by holding the price within a band), implicit subsidies given to farmers (by holding the price above a floor) are compensated by implicit taxes (by holding the price below a ceiling). But following current WTO rules, only the subsidies are taken into account in determining the AMS.

Each of these three elements means the use of buffer-stocks by countries (including DCs) is strongly limited by current rules of the WTO, mainly because these rules strongly overestimate the real support provided to farmers through public stocks.

3. New rules for aligning the contribution of public stocks to AMS with a more realistic measure of the domestic support they provide

The essence of these new rules is to modify the way the contribution of public stocks to AMS is calculated in order to correct the three biases listed above. Our proposal has three components:

1. The first component is to use as a reference price (Pr) the average price of the last x months, instead of the price average over the years 1986 to 1988. The level of the price support should be the difference between the procurement price and the *current* market price; using the price that prevailed 25 years ago as a reference is meaningless. This means that the reference price should be based on the average unit value of either exports (f.o.b.) or imports (c.i.f.) for the agricultural product concerned *during the last x months*. In addition, the reference price should include the transport costs between the port and the domestic market and the taxes applied to imports and exports. To illustrate this, let's assume that, for an importing country, the import (c.i.f.) unit value is 300, the import tax rate 20% and the transport cost from the port to the capital of the country is 50. This means that the price cost of the imported product is 410 ($300 \times 1,2 + 50$) and not 300 and that the reference price to be used should be 410. If the public stock buys at 430, the *per unit* amount of the real subsidy is 20 ($430 - 410$) and not 130 (as calculated by using the import (c.i.f.) unit value for Pr). In other words, for an importing country, using the import (c.i.f.) unit value for Pr strongly

underestimates P_r (and as a result *overestimates* the contribution of public stocks procurement to AMS). The situation is exactly the opposite for an exporting country: using the export (f.o.b.) unit value for P_r means overestimating P_r and therefore underestimating the contribution of stocks procurement to AMS. So, the equity between importing and exporting countries requires that for importing countries, we should take $P_r = \text{import (c.i.f.) unit value} + \text{import taxes} + \text{transport costs from the port to the domestic market}$, and for exporting countries $P_r = \text{export (f.o.b.) unit value} - \text{export taxes} - \text{transport costs from the domestic market to the port}$.

2. The second component is to use for the quantity Q in the formula the quantity actually purchased by public stocks, instead of the entire national production. For some countries, the quantity procured by public stocks accounts for a very small share of the marketed production and therefore it does not affect the market price. For other countries, the quantity procured by public stocks affects the market price but only during the procurement period (usually a few months). In this case, the quantity to be used in the calculus should theoretically be the quantity marketed during the procurement period of the public stock³. But, usually, no data is available on this quantity. Therefore our recommendation is to take in all cases the quantity actually procured by public stocks. The practical implication of this would be to allow countries to buy above the current market price up to 10% of the national production with a zero contribution to AMS (thanks to the *de minimis* mechanism). Note that purchasing 10% of production is often sufficient to guarantee a floor price to farmers, at least during part of the year (due to self-consumption, 10% of production can mean as much as 20% to 40% of marketed quantities in many DCs). As a matter of fact, in Indonesia, the public stock (BULOG) succeeded in stabilizing the price of rice by buying only 8.2 percent of average rice production. It was never more than 10 percent, but BULOG did buy almost half of the deviation in production (from trend)⁴.
3. The third component of the proposal is to include in the calculus the implicit taxes on farmers created by interventions to hold the price below a ceiling. This would imply that governments calculate (and notify) the contribution of public stocks to AMS not on the basis of the interventions (procurement, sales) of the last completed year but on the basis of the interventions of the five preceding years. In this way, it would be possible to take into account the fact that governments subsidize production some years (by holding the price above a floor) but also tax it other years (by holding the price below a ceiling). Adopting this modification would encourage governments to use public stocks to stabilize prices (hold them within a band) rather than support them (try to maintain only a floor). It would also encourage governments to sell the stocks on the domestic market, thereby lowering their AMS should the price be below the reference price, rather than on the international market.

³ For instance, in Mali, the production of millet and sorghum is around 2,500,000 metric tons, of which only 20% are marketed (80% are self-consumed by farmers). This means that, during the whole year, around 500,000 metric tons of millet and sorghum are marketed. Only part of them is marketed during the procurement period of public stocks (usually the post-harvest period). Moreover, in this country, the quantity procured by public stocks is usually not enough to affect significantly the market price.

⁴ For more details, see Timmer, P. (1996), "Does BULOG Stabilize Rice Prices in Indonesia? Should It Try?" *Bulletin of Indonesian Economic Studies* 32(2), pp. 45-74.

The resulting formula to calculate the contribution of public stocks to AMS would be:

$$C = \sum_{n-4}^n [(Pp - Pr) \cdot Qp - (Pr - Ps) \cdot Qs] / 5$$

with:

n = last completed year

Pp = procurement price of public stocks

Pr = average c.i.f. unit value of imports for the agricultural product concerned during the last *x* months + import taxes + transport costs from the port to the domestic market (for importing countries)

Pr = average f.o.b. unit value of exports for the agricultural product concerned during the last *x* months – export taxes - transport costs from the domestic market to the port (for exporting countries)

Qp = quantity procured

Ps = selling price of public stocks

Qs = quantity sold

Adopting these new rules would allow a more accurate alignment of the contribution of public stocks to AMS with the real amount of subsidy they provide.

4. Consequences of keeping current WTO rules on public stocks

Maintaining the current WTO rules on public stocks would entail several consequences:

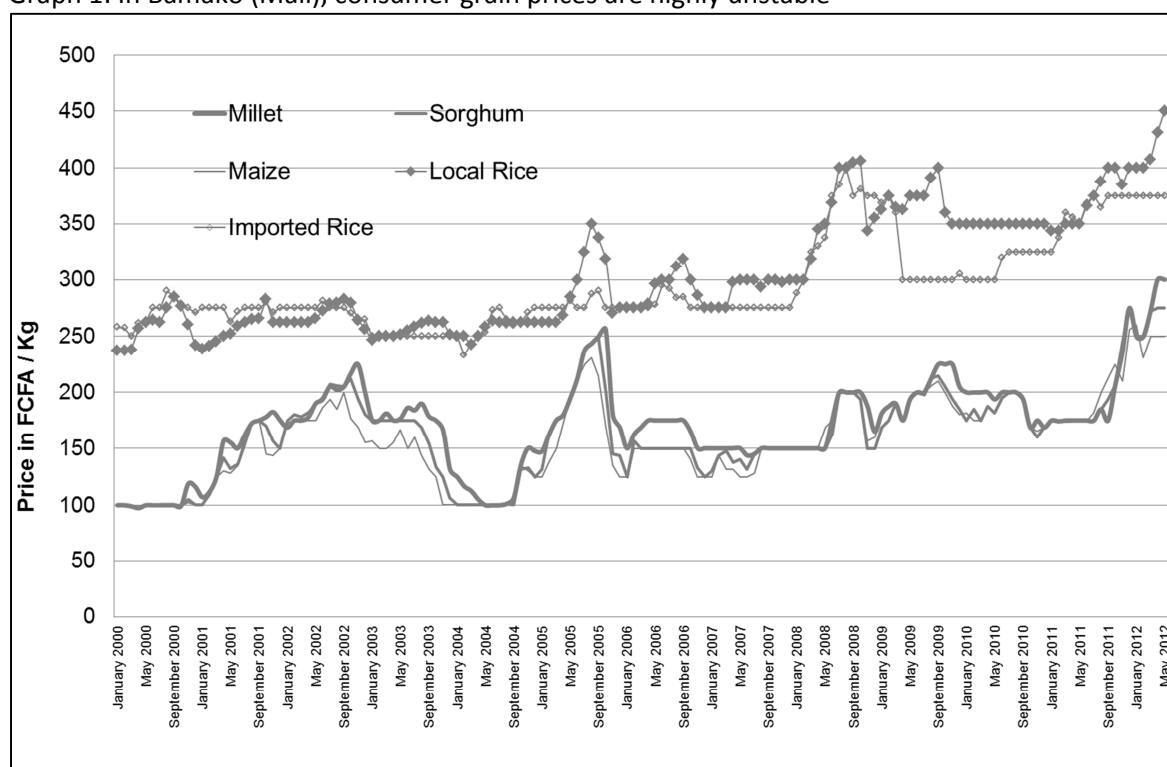
Unfairness. As current WTO rules strongly overestimate the real subsidy provided by public stocks, they are obviously unfair, as they disadvantage the countries that use this kind of tool to protect their farmers. And these countries are mainly DCs: alternative tools do exist to protect farmers (and are used by developed countries), but they are not suited for DCs. Very few DC farmers are covered by price hedging tools because these tools do not exist for the commodities they deal with (rice, millet, sorghum, yams, cassava, etc.), because they are complicated to use and expensive (these tools are only suitable for stakeholders that sell or buy large quantities of commodity), and because they do not provide an effective cover to farmers located far from existing futures markets (see graph 2 for an example). Few DC governments provide cash transfers to their farmers when prices decrease too much, probably because these kind of countercyclical transfers are difficult to implement in DCs due to the lack of databases on farmer productions and incomes.

Bad incentives. As current WTO rules (based on a biased AMS formula) are erroneously penalizing stocks, maintaining them is likely to lead countries to use trade policies to try to stop food prices reaching extremely low or high levels. By implementing border measures (changes in tariffs, quotas, bans) governments can regulate imports and exports to absorb surpluses or make up deficits on their domestic market. The mechanism is the same as the one used by public stocks (it also relies on regulating the quantity available on the domestic market), but the consequences for other countries are quite different: whereas trade policies may increase the instability on international markets (as happened in 2008 on the rice market), public stocks are likely to have the opposite effect: by

increasing the global level of stocks, they contribute to a reduction in the frequency and the magnitude of price spikes on international markets. As a matter of fact, price spikes only occur on international markets when the level of global stocks is low (see graph 3 in annex). Revising the formula for the support provided by public stocks could encourage some countries to rely more on stocks and less on ad hoc trade restrictions, especially in the post-2008 context where many DCs are willing to increase the level of their public stocks so as to reduce the vulnerability of their smallholder producers and consumers that live close to or below the poverty line.

Annex

Graph 1: In Bamako (Mali), consumer grain prices are highly unstable



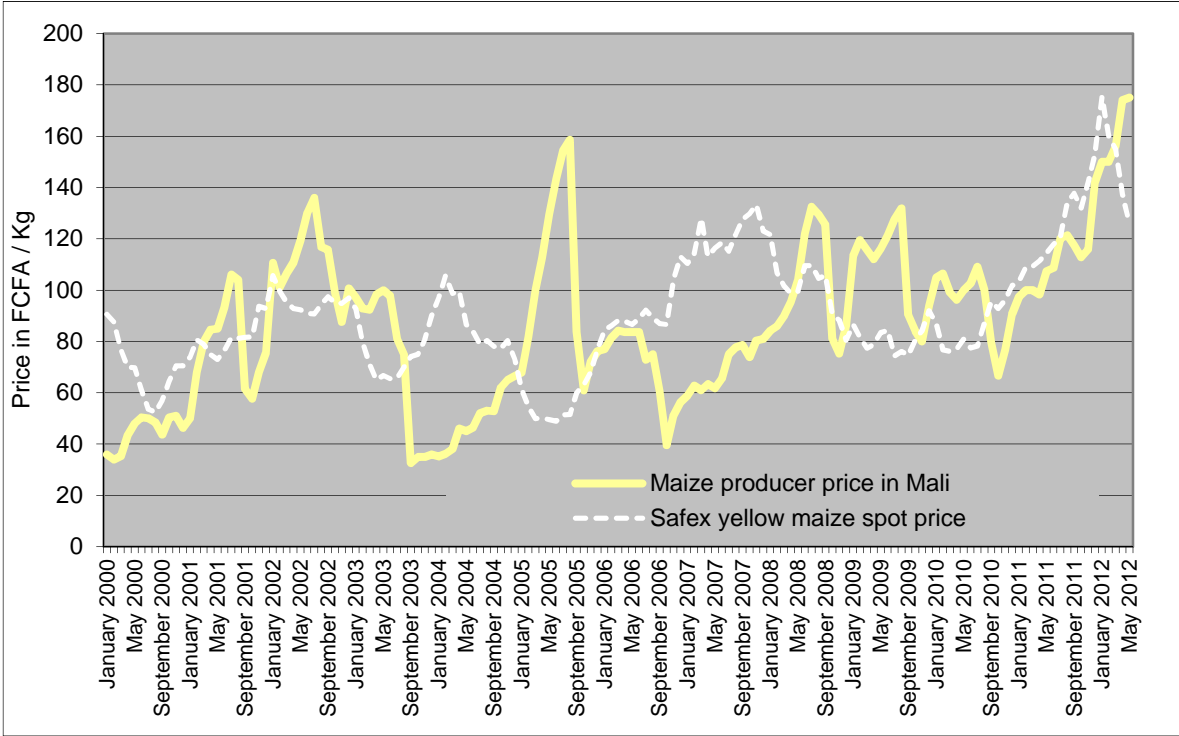
Source: Observatoire du Marché Agricole (OMA)

Table 1: In Mali, grain provides most of the calories in the diet and accounts for a significant proportion of household expenditures (for all social classes).

	Proportion of grain in dietary calories	Proportion of grain in household food expenditures	Proportion of grain in household total expenditures
Average for rural households	86.0%	51.1%	34.9%
Average for the poorest 20% of rural households	88.6%	57.6%	44.3%
Average for the richest 20% of rural households	82.0%	44.1%	26.5%
Average for urban households	73.1%	31.9%	18.4%
Average for the poorest 20% of urban households	78.6%	38.5%	27.3%
Average for the richest 20% of urban households	68.0%	27.4%	13.6%

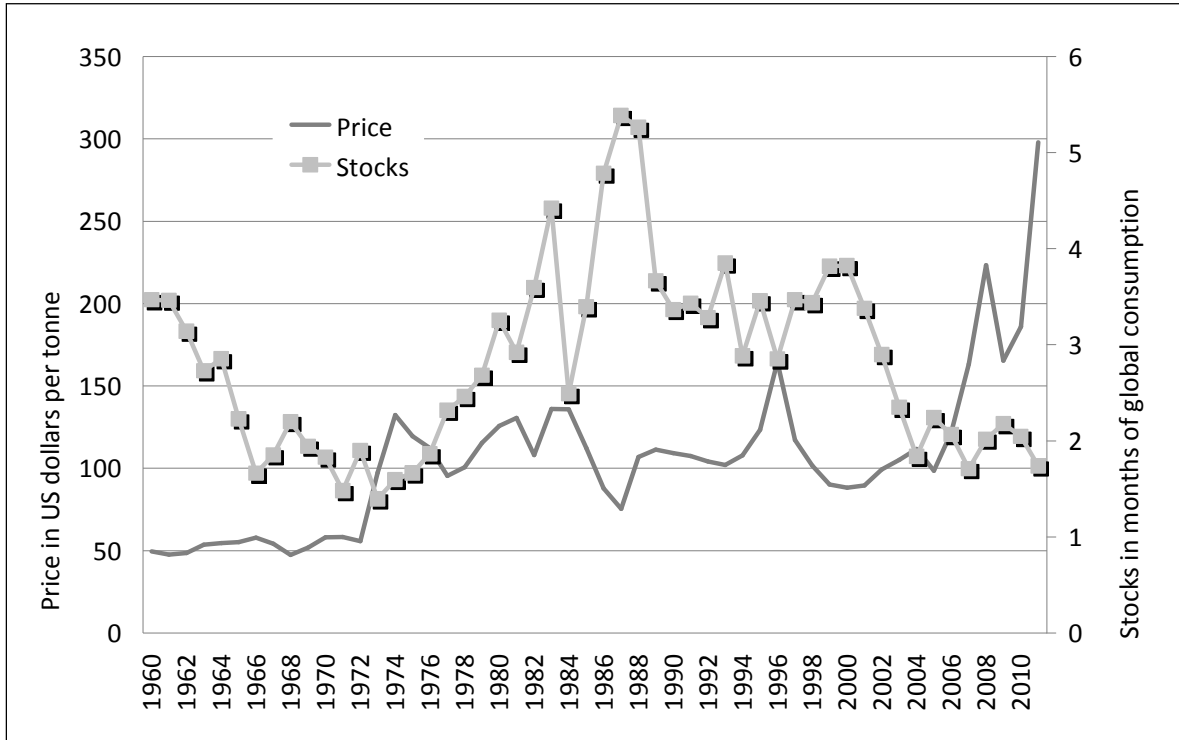
Source: Bocoum (2011), *Sécurité alimentaire et pauvreté, analyse économique des déterminants de la consommation des ménages, application au Mali*, PhD Thesis, Montpellier University 1, 242 p. + annexes.

Graph 2: In Mali, producer grain prices are highly unstable and the risk of price collapse cannot be hedged on the nearest futures market (SAFEX based in South Africa): if covered on SAFEX, Malian maize farmers would receive a financial compensation when SAFEX price collapses, what has not been the case when price collapsed in Mali in 1999–2000, 2003–2004, 2006–2007 and 2010.



Source: Observatoire du Marché Agricole (OMA) and SAFEX

Graph 3: International price spikes only occur when the level of global stocks is low: the case of maize.



Sources: IMF for prices and USDA PSD for stocks