Public stockholding programmes: What implications for food security?

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Despite the high costs involved, a large number of governments hold wheat and rice stocks. In this article, the author considers the factors that drive public stockholding programmes, and reviews national experiences with public stockholding in relation to food security. Finally, the article assesses the scope for countries to rely on international trade to fulfil certain aspects of public stockholding objectives.

Stockholding is an expensive undertaking: investments are needed to build silos and warehouses; maintenance costs are not trivial and quality may be impaired if the cereals are not rotated regularly. Yet, despite the high costs involved, a large number of governments hold wheat and rice stocks.

This is especially the case where these products provide a high share of dietary content, being less prominent where diets are more diversified. Many of the countries that hold public grain reserves systems have a history of famines, or are particularly exposed to shocks (e.g. typhoons, floods and droughts, civil strife and wars) that may disrupt their production or distribution systems.

Yet government stocks are often not limited to emergency reserves. Indeed, stocks are often built up as part of more fundamental and long-term policies, in particular food self-sufficiency policies.

In this respect, it is noteworthy that food self-sufficiency pledges have gained momentum since the 2008 food price crisis, when the implementation of export restrictions by traditional supplying nations contributed to the surges of international food prices, eroding net food importing countries' confidence in world trade to meet their food needs. The 2008 experience also confirmed the importance of wheat and rice for food security and reinforced their status as "political commodities," essential for social stability and, therefore, carrying a higher value for governments than simply embedded in their market prices.

In general, there is little information on the actual volumes kept in government inventories, with a few exceptions, the most salient of which is India, which reports monthly wheat and rice quantities held in public inventories (as well as quantities procured and distributed by government agencies), and the Philippines, which reports on a quarterly basis for rice and maize. Data on public rice reserves are also released by Japan, as well as Bangladesh, Brazil, Indonesia and Singapore, although not always regularly.

Because of its importance, public cereal holding is often subject to "mandates," such as in India or the Philippines, or comprises an integral part of the Food Law, as in Indonesia or Singapore.

Although little is known about the size of state grain reserves in China, in 2015 the country announced its intention to raise them by 33 percent so as to cover six months' worth of national consumption. The mandate is less ambitious in the Philippines, where the National Food Authority (NFA) is required to hold the equivalent of at least 30 days of national rice consumption. In Malaysia, BERNAS is committed to hold a minimum stock of close to 300,000 tonnes. Singapore requires importers to keep two months' worth of imports in a private warehouse designated by the Government. India sets a minimum level required to be held by the Food Corporation of India at the beginning of each quarter for both rice and wheat.

For a number of countries (e.g. Saudi Arabia, Iraq, Syria, and the Philippines), public stocks are mainly sourced in foreign markets, through imports conducted by state trading agencies or authorised private companies. Such supplies are mainly for use by public distribution systems and for price stabilisation.

In others, government stocks are made of both imports and domestically produced cereals (e.g. Bangladesh, Indonesia, Japan, Republic of Korea, Malaysia, and Turkey), the latter often associated with local purchases at minimum set prices. Government procurement from domestic producers is also much behind the accumulation of public stocks in countries that have already achieved self-sufficiency or even gained "exporter" status (e.g. in the case of rice, Brazil, China, India, Thailand, and Russia).

Setting procurement prices substantially above world levels can be unsustainable, as demonstrated by Thailand's recent experience with rice. In 2011, the newly elected Thai Government raised minimum prices to paddy rice producers by 30-50 percent, to some US$500/tonne, equivalent to some US$770 in milled terms, well above the prevailing international prices. The high paddy support price policy, which was maintained until 2014, resulted in burgeoning government rice inventories (rising from 7.2 million tonnes by end 2011 to 16.7 million tonnes in 2014) and slumping rice exports in 2012 and 2013. The high cost of the rice pledging programme between 2011 and 2014 (US$16.5 billion unofficially reported) was partly behind the destitution in 2014 of the ruling government. Since then, the paddy pledging scheme prices have been lowered, which has enabled Thailand to recoup its competitive edge on export markets.

Do government stocks affect market prices? As with any such operations, and depending on the quantities involved, government purchases from domestic markets tend to underpin local prices, while government open market sales and public distribution systems tend to keep those low or make them lower. Moreover, it is likely that, independently from such operations, the mere existence of government reserves influences market agents' expectations, and therefore prices. This is the reason why the sizes of public reserves are often kept secret.

Instead of accumulating large wheat and rice reserves, could countries rely on international trade to counter an emergency or a large production shortfall? Such an option might be sensible for relatively small countries (especially if their diets are well diversified), whose imports have limited influence on international prices. The same cannot be said of large and populous countries, with high per caput consumption levels, and especially for rice.

Indeed, only 44 million tonnes of rice, or less than 9 percent of world production, are currently exchanged on world markets, as against some 174 million tonnes, or 23 percent, for wheat. At some 145 million tonnes, FAO's estimates of China's rice consumption would be more than three times the whole volume of rice traded internationally. Rice consumption in India, at 98 million tonnes, would be more than twice that volume. Reliance on thin international markets is a difficult proposition for countries with large domestic needs, especially when national food security is at stake.

In that respect, it is important to note that the large public rice reserves held by countries such as China or India, have also offered a precious degree of food security for the rest of the world. For instance, in 2002-2003, India experienced a 23 percent drop in its rice production, equivalent to 22 million tonnes. At that time, the entire volume of rice trade amounted to only 28 million tonnes. Yet India's production shortfall did not cause major disruption to the international rice market, because, rather than resorting to importing rice, India could rely on its domestic (and largely government-owned) stockpile to compensate for its production shortfall.

Had it not been for India's rice central pool reserves, this could have triggered a surge in international prices of far greater proportions than in 2008. True, the 2002-2003 production drop was exceptional but, amid growing uncertainty about the impacts of climate change on major food crops production, governments may find it increasingly difficult to trade national food security for rice and wheat market liberalisation.

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