



Continued price instability questions reliance on global food markets

In outlining the impact of price volatility on food insecurity and hunger, this chapter argues that higher food prices can be explained by a number of intertwined factors such as slowing growth in food production, lower stock levels, increased use of agrofuels and growing commodity and financial speculation. In contrast, increased demand from emerging economies like China and India is not a major factor in explaining higher food prices.

Against the background of powerful forces at play in today's globalized world, a number of realistic measures are highlighted and suggestions made for coping with price instability. These include government measures to limit domestic inflation and the neglected and often crucial role of remittances and safety nets. Food aid programmes and the ability of the global food market to supply sufficient and cheap food must be viewed with scepticism. Rather, the way forward lies in regulation, social protection and increased food production.

After decades of relative stability, international prices of major cereals started to rise in 2007, then doubled in the first months of 2008. In one year, global wheat prices increased by 150 per cent, more than doubling the price of bread, while high oil prices increased the costs of transport and manufactured goods.

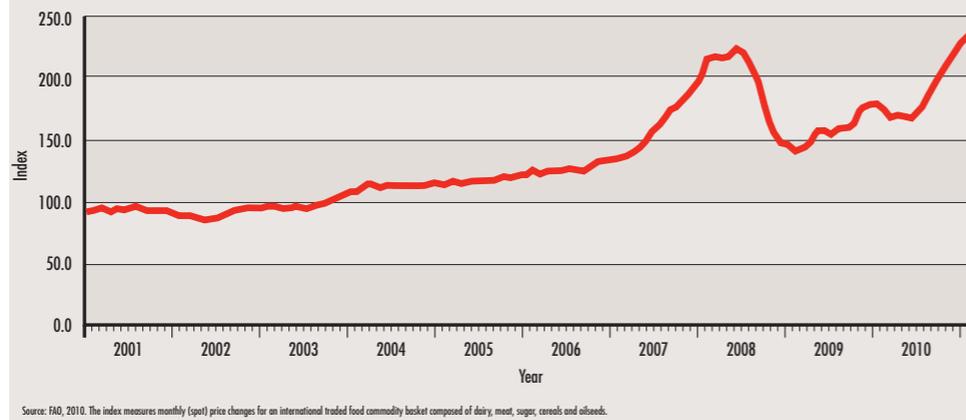
High prices have resulted in a massive increase in food insecurity around the world. The Food and Agriculture Organization of the United Nations (FAO) estimated that by the end of 2008, high food prices had added 109 million people to the ranks of the undernourished, raising the number of hungry people to an all-time record of 1 billion in 2009 (FAO, 2007; 2009). Save the Children estimated that in 2008 alone, a minimum of 4.3 million (and potentially as many as 10.4 million) additional children in low- and middle-income countries may have become malnourished as a result of food price rises (Save the Children, 2009a). These figures confirmed the correlation between food prices and the level of child malnutrition identified by previous research in Asia and Africa (Save the Children, 2009b; Torlesse et al., 2003; Mousseau, 2006; see also Box 3.1).

Poor people in both rural and urban areas, who typically spend between 50 and 80 per cent of their income on food, were hardest hit. Faced with high food prices, poor people in low- and middle-income countries cut back on the quality and quantity of food they consume, struggle to pay for education and healthcare and are forced to sell assets (Hossain et al., 2009). High food prices also resulted in civil unrest in some

Photo opposite page: Food is distributed in Buge, a village in Ethiopia, which experiences chronic food insecurity and where higher food prices have placed millions more people at greater risk of hunger. Yet Ethiopia is one of many countries where land is increasingly used to grow agrofuels rather than food; thus there is a greater need for food aid and expensive food imports.

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Figure 3.1 FAO food price index, 2001–2011



30 countries in 2007–2008, putting many governments under pressure (Mousseau, 2010). Social disorder toppled the government in Haiti (Reuters, 2008), while demonstrators were killed not only in Haiti but also in Cameroon, Mozambique and Senegal.

International food prices decreased in the second half of 2008 and in 2009, leading some observers to believe the crisis could have been an ‘accident’. However, a new round of food inflation in 2010–2011 confirmed that the world is facing a major problem of unstable agricultural markets and volatile food prices. After 18 months of relative stability, FAO’s food price index increased by more than 30 per cent between June and December 2010 (FAO, 2010). The price of cereals jumped a staggering 57 per cent over the same period. This new increase in prices again resulted in social unrest: 13 people were killed in the food riots that took place in the wake of high bread prices in Mozambique in early September 2010 and the price of food was one of the triggers that led to the massive protests which spread across the Arab world in early 2011.

The increases in food prices in 2007–2008 and 2010–2011 (see Figure 3.1) have highlighted the diverging views among experts, policy-makers and activists about the causes of price volatility and fuelled the debate about the policy responses required to address this volatility.

Box 3.1 The impact of higher food prices on child nutrition

The link between food price volatility and childhood hunger and malnutrition has been studied in several countries. In Bangladesh, three studies of the effect on children of food price rises – one looking at price fluctuations in the 1990s (Torlesse et al., 2003), the other two at the price spike of 2008 (Sulaiman et al., 2009; Save the Children, 2009b) – illustrate

not only the threat of acute childhood malnutrition but also the often-neglected background epidemic of chronic undernutrition.

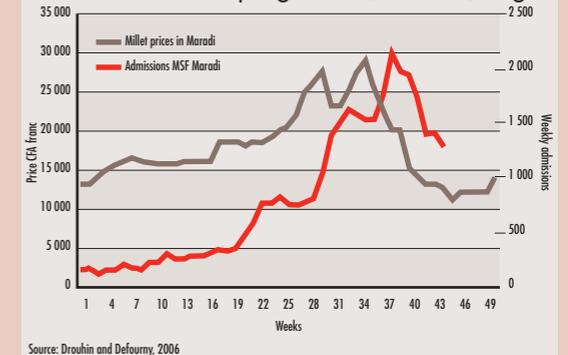
Across Bangladesh, when the price of rice increases, rice consumption remains steady or even increases as non-rice consumption falls (Torlesse et al., 2003). When households are already spending most of their income on food – and often more than half of their food costs on rice alone – there is no safeguard when prices increase. Families will therefore maintain rice consumption at the expense of more nutritious foods, such as vegetables, fruits, meat, fish and dairy.

The strategies that poor households employ to cope with higher food prices often have far-reaching detrimental effects, especially on children. As well as reducing the consumption of nutritious food, such strategies include cutting back on health expenditure, removing children from school (often so that they can work) and selling productive assets (e.g., livestock). These problems are compounded when poor families borrow money in times of high food prices, often prioritizing loan repayments over investing in livelihoods or more diverse diets (Save the Children, 2009b).

A comparison of children under the age of 5 in 2006 with children of the same age in 2008 (when rice prices were significantly higher) showed that the prevalence of underweight children increased by 5.5 per cent among the very young (0–6 months old) in 2008 and 6.7 per cent among older children (2.5–5 years). For the very young, most of whom are breastfed, maternal health is likely to have a major influence on child malnutrition (Sulaiman et al., 2009).

Looking at a rural community in Bangladesh in late 2008, Save the Children (2009b) found that up to half of the community’s households had a lower disposable income than before the price spike. Furthermore, higher rice

Figure 3.2 Millet prices and admissions to the MSF treatment programme, Maradi, Niger



prices had a much greater effect on disposable income than did the failure of the 2007 wet-season rice harvest. Many poor families were unable to afford an adequately nutritious diet and the proportion of households unable even to meet their energy requirements doubled. Comparing stunting in children who were very young at the time of the price hike with that in older children – who were born at least two years before the crisis, in less challenging conditions – suggested that the incidence of chronic malnutrition was 7 per cent higher than it would have been had prices remained stable.

The 2005 food crisis in the West African country of Niger presents another stark example of the danger to children of high food prices. In the first quarter of 2006, Médecins Sans Frontières (MSF) treated 26,000 children suffering acute malnutrition in the country’s Maradi region, up from fewer than 20,000 for the whole of 2004. Figure 3.2 shows the dramatic correlation between millet prices and severe malnutrition, with admissions of both children and adults to the MSF treatment programme spiking five weeks after price rises (Drouhin and Defourny, 2006).

Ways to prevent or mitigate food crises could include feeding programmes in schools.

They are important although they do not reach the youngest children, who are most at risk of mortality due to malnutrition. In addition, the hungriest and most undernourished children are often not in school (Mousseau, 2010).

When disasters strike areas where childhood malnutrition is already prevalent, a vicious cycle is set in motion. The resultant malnutrition, devastating in itself, will in turn render

children less able to cope with the social and physical effects of disaster. Children's long-term development is not only compromised directly through malnutrition, but also indirectly if, for example, families cannot afford to keep children in school. The effects of current price spikes thus reverberate through time, making communities less resilient in the face of future disasters.

Increases in food prices have been explained by a variety of factors. Decreases in food production and low global stocks, growing demand in emerging economies, the rise of agrofuels, trade measures – namely export bans – taken by some countries and financial speculation are among the key elements thought to drive inflation.

A stretched global food market

A number of gradually evolving long-term trends have slowed the growth of food production in the past two decades and resulted in a reduction of global food stocks.

Compared to the period between 1970 and 1990, when the production of aggregate grains and oilseeds rose by an average of 2.2 per cent per year, the annual growth rate since 1990 has declined to about 1.3 per cent (Trostle, 2008). Several factors have contributed to this decline, including reduced state intervention in the agricultural sector, reduced public support and overall investment in agriculture in terms of both financial resources and the design of adequate policies, and a decline in research and development by governmental and international institutions.

The decrease in the rate of growth of production has also been affected by scarcity of resources – land degradation and water depletion – as well as by the effects of climate change. Each year, 5 to 10 million hectares of agricultural land are lost due to degradation caused by water shortages (Stigset, 2008).

Agricultural production is weather sensitive, and a drought or flood can reduce output significantly. Adverse weather conditions in some major grain- and oilseed-producing areas, such as Australia, the European Union (EU) and Ukraine, contributed to the decline in production in 2006 and 2007. In 2010, wildfires and bad harvests in the Russian Federation and other major cereal-producing regions of the former Soviet Union reduced the availability of cereals on the global market. Droughts, floods and freezing weather due to climate change are expected to continue having an adverse impact on agricultural output and food security in low- and middle-income countries (FAO, 2007).

Beyond production, it must be noted that the largest flows of global trade of grains such as maize, rice and wheat originate from only a small number of exporting countries. Argentina, Brazil and the United States together account for 90 per cent of world maize exports; India, Pakistan, Thailand, the US and Viet Nam represent 80 per cent of world rice exports; and Argentina, Canada, the EU, the Russian Federation and the US are responsible for 74 per cent of world wheat exports (Jiang, 2008). Rice is particularly sensitive because its international market is slight, i.e., only a small proportion of total rice grown enters into international trade (most major consumers are also major producers). Any climate-related fall in output of such exportable crops or change in the policies of these major cereal-exporting countries will have a significant impact on world markets.

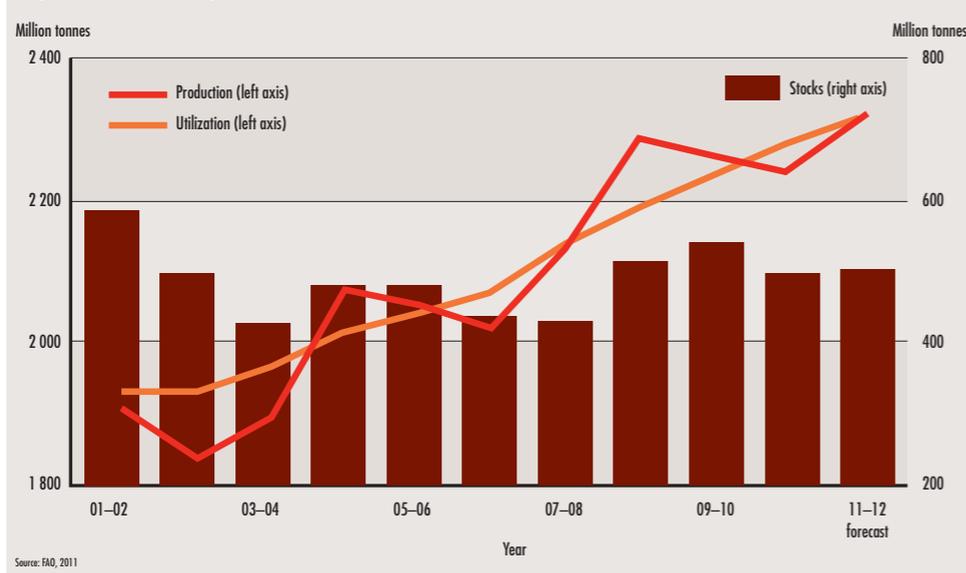
The decline in agricultural growth has been accompanied by a decline in grain stocks (see Figure 3.3). FAO estimated that world cereal stocks had fallen to just 418 million tonnes at the end of 2008, their lowest level since 1982 (FAO, 2008b). World wheat stocks dropped to 147 million tonnes in 2008, the lowest level since 1977. In 2008, wheat stocks in the United States were at their lowest level for 60 years, as reductions in exports from other key exporting countries caused a rise in US exports to cover the global shortfall. Global food stocks recovered slightly in 2009 and 2010, when they increased to 501 million and then 525 million tonnes, but since the beginning of 2011 they are estimated to have fallen to 479 million tonnes (FAO, 2010).

Several factors are responsible for declining grain stocks. Given that the cost of holding grain stocks is as high as 15–20 per cent of the value of the stock per year (Lin, 2008), government-held buffer stocks have been discouraged after nearly two decades of low and stable prices. Furthermore, as agricultural markets have become increasingly liberalized, there has been a general perception of the reduced need for individual countries to hold public grain reserves. The private sector and international financial institutions have maintained that holding public stocks is costly and inefficient; the rise of 'just-in-time' inventory management and years of readily available global supplies were further incentives to reduce stock holdings (Trostle, 2008).

Low stocks and high prices have threatened the food security of many countries dependent on imports for their food supply, and a number of governments realized how vulnerable they had become. The need to secure their food supply, through the constitution of stocks, export restrictions or a rush to buy food commodities on the international market, was another aggravating factor pushing prices even higher.

Agrofuels and the tighter relationship between food and energy

The relationship between food and energy has gone through three stages. The first stage corresponds to the past few decades; the prices of food crops and energy have become

Figure 3.3 Cereal production, utilization and stocks

increasingly linked to each other due to the use of fossil fuels in food production (for fertilizers and irrigation) and transport. According to cost-of-production surveys and forecasts compiled by the US Department of Agriculture (USDA), the doubling of prices of energy-intensive components of production, including fertilizer and fuel, led to a rise in production costs in the United States for maize, soybeans and wheat of around 22 per cent between 2002 and 2007. This rise in production costs increased the export prices of food commodities by about 15–20 per cent between 2002 and 2007 (Mitchell, 2008).

The second stage has seen this ‘old’ relationship between energy and food tighten dramatically in the past decade, following the increase in demand for coarse grains due to agrofuel production in the United States and the EU. High oil prices in recent years, together with concerns over energy security and climate change, have led to the promotion of the use of agrofuels as a supplement to fossil fuels. Agrofuels have received a further boost through generous policy support (subsidies and tariffs on imports) and ambitious mandates.

The 2007 US Energy Bill almost quintupled the agrofuel target to 35 billion gallons (132bn litres) by 2022, while the EU aims to use agrofuels for 10 per cent of its transportation fuels by 2020. The EU, the largest biodiesel producer, began to increase biodiesel production in 2005. US ethanol production jumped from 1 billion gallons (3.8bn litres) in 2005 to 5 billion (19bn) in 2006 and 9 billion (34bn) in 2009. Between 1980 and 2002, the amount of maize used to produce ethanol in the US rose by 24 million tonnes. Between 2002 and 2007, it increased by 53 million tonnes, accounting for 30 per cent of the global growth in the use of wheat and feed grains (Trostle, 2008). As ethanol production has expanded, maize stock levels have declined

and maize prices have increased. According to FAO Director-General Jacques Diouf, by early 2011 the expansion of agrofuel production had already diverted 120 million tonnes of food from human consumption (Reuters, 2011).

Significantly, land-use changes due to expansion of acreage under agrofuel feed-stocks reduced production of other crops. For instance, US rice production decreased by 12 per cent from 2006 to 2007 after 16 per cent of the land used for rice production was redeployed for maize production (Berthelot, 2008a). Maize expansion also resulted in a 16 per cent decline in land for soybeans, thereby reducing US soybean production and leading to a 75 per cent rise in soybean prices between April 2007 and April 2008 (Mitchell, 2008). Similarly, the expansion of biodiesel production in the EU diverted land from wheat to oilseeds, slowing the increase in wheat production. The eight largest wheat-exporting countries expanded land area for rapeseed and sunflower production by 36 per cent between 2001 and 2007, while the wheat land area fell by 1 per cent (Mitchell, 2008).

Many observers, including Donald Mitchell at the World Bank, have argued that this increase in demand and shifts in land use triggered the spike in food prices in 2007–2008. Without the increase in agrofuel production, said Mitchell, “global wheat and maize stocks would not have declined appreciably, oilseed prices would not have tripled, and price increases due to other factors, such as droughts, would have been more moderate” (Mitchell, 2008).

The third stage of the relationship between oil and food started in 2007–2008, with the expansion of agrofuel crops in low- and middle-income countries. In addition to the effects on global demand, the development of the agrofuel industry and the setting of targets in rich countries encouraged the development of energy crops in low- and middle-income countries, including in many food-insecure countries such as Ethiopia and Mali. As a result, agricultural investments for agrofuel development have been booming in these countries, with a major increase in areas planted for energy crops and a significant impact on the availability of water and land for food production. This development is an issue of serious concern for food security as land and water resources are taken away from smallholders and pastoralists, and there is potentially a higher dependency on food imports for countries shifting from food to agrofuel cultivation.

Beyond the role of agrofuel expansion on the price increase of 2007–2008, the tighter relationship between food and energy markets constitutes a major factor in the long-term volatility of food prices since any event affecting oil prices (such as conflict in a major oil-exporting country) could drive up oil prices, affect the demand for alternative energy sources such as agrofuels and increase the price of food as a result. This relationship was again evident in early 2011, when high fuel prices resulted in more food crops being used to produce agrofuels. USDA estimated in April 2011 that the use of maize to produce ethanol rose from 31 per cent of total maize output in 2008–2009 and would reach a projected 40 per cent in 2010–2011 (IRIN, 2011).



Increased demand from emerging economies: a reason for price increases?

The surge in food commodity prices has also been attributed to “strong per capita income growth in China, India, and other emerging economies” which “buoyed food demand, including for meats and related animal feeds, especially grains, soybeans, and edible oils” (IMF, 2008). FAO’s Diouf declared in 2008 that higher demand from countries like India and China, where gross domestic product (GDP) is growing at 8–10 per cent was responsible for high prices (*National Post*, 2008). It is plausible that mass consumption in India and China, two countries accounting for more than one-third of the world’s population and which grew at 9.2 per cent and 11.4 per cent respectively in 2007, could contribute to the 2007–2008 price increases. However, closer examination reveals otherwise. Demand for food is ‘income inelastic’ – the quantity of food people demand does not vary significantly and rapidly with income, though the composition of the food basket may change. Increased incomes lead to demand for more expensive, presumably ‘higher quality’ food (such as meat), in line with Bennett’s law, i.e., the share of animal products in calories consumed increases as incomes rise.

In addition, both India and China maintain a food trade surplus, thus remaining net exporters of cereals. China maintained an average food trade surplus of US\$ 4 billion from 2000 to 2006 and has long been a net exporter of cereals (Berthelot, 2008a).

India, too, has been a net exporter of agricultural and food products since 1995. It is also a net exporter of meat and dairy products. By contrast, the EU remained the largest importer of oilseeds and the fifth largest importer of cereals in 2007–2008, while its food trade balance remained in deficit (Berthelot, 2008b). A World Bank report puts the low- and middle-income countries’ role behind the food price crisis in perspective: “Increase in grain consumption in developing countries [sic] has been moderate and did not lead to large price increases. Growth in global grain consumption (excluding agrofuels) was only 1.7 per cent per annum from 2000 to 2007, while yields grew by 1.3 per cent and area grew by 0.4 per cent, which would have kept global demand and supply roughly in balance” (Mitchell, 2008).

Although the growing demand in emerging economies cannot explain the sudden price increase seen in 2007–2008, it may nevertheless have been an indirect cause. The result of highlighting the growing demand in cereal markets may have helped fuel financial speculation and the growing interest of investment funds in food markets.

Financial speculation on the rise

Doubtless increasing demand for food crops in a context of high prices and low levels of stocks has encouraged growing commodity speculation in recent years, further fueling the food price hikes (ADB, 2008). However, favourable market prospects alone are not sufficient to explain the high levels of speculation seen in recent years.

The recent deregulation of financial markets has removed quantitative restrictions on speculative positions in agricultural futures contracts and allowed the creation of a number of new financial products (derivatives in particular) and a massive expansion of speculation on food markets (Jones, 2010).

Regulatory loopholes have also facilitated the surge in speculative investment in commodity markets to unprecedented levels in recent years. Moreover, with the bursting of the housing bubble in the United States in mid-2007 and low levels of global grain stocks, financial investors saw opportunities in the food commodities markets to diversify their portfolios and speculate in commodity futures, putting further upward price pressure on food and energy commodities. In June 2008, the US Homeland Security and Governmental Affairs Committee held pension funds responsible for price spikes and noted that the amount of fund money invested in commodity indexes had risen from US\$ 13 billion in 2003 to US\$ 260 billion in March 2008 (IUF, 2008). Box 3.2 provides more details about financial speculation and policy options to curb it.

Can global food markets be durably stabilized?

The above argument suggests that there is no single cause of price volatility but several intertwined factors, which mutually reinforce each other during feverish periods. A

A man harvests wheat on a farm in Sindh, Pakistan. The sharecroppers who occupy the land earn a percentage of the wheat they cultivate. Many sharecroppers fall into debt when purchasing seeds and fertilizer, and may be compelled by lenders to sell their crops below market value. Because of this system, sharecroppers rarely benefit from increased food prices.

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Box 3.2 Tackling speculation in financial markets

There is today a growing consensus on the significant role of financial speculation in the volatility of food markets. In its *2009 Trade and Development Report*, the UN Conference on Trade and Development (UNCTAD) found that increased commodity trading contributed strongly to the rise in food prices in 2007–2008 (UNCTAD, 2009). In his 2010 briefing, Olivier De Schutter, the UN's Special Rapporteur on the Right to Food, observed that the "changes in food prices reflected not so much movements in the supply and/or demand of food, but were driven to a significant extent by speculation that greatly exceeded the liquidity needs of commodity markets to execute the trades of commodity users, such as food processors and agricultural commodity importers" (De Schutter, 2010).

'Traditional' commodity speculation relates to so-called 'futures contracts' for agricultural products. The futures market is intended to be a stabilizing tool for farmers, who can sell their harvests ahead of time with limited exposure to price movements (otherwise known as 'hedging'). Food traders thus act as 'insurers' to farmers, allowing them to invest with a guaranteed return on investments. In a futures contract, quantities, prices and delivery dates are fixed, sometimes even before crops have been planted. As food traders are supposed to buy when prices are low and sell when prices are high, such contracts serve to make prices less volatile rather than more so. Such 'traditional' speculation thus appears as a normal and healthy pattern in agriculture, where all actors, including farmers themselves, speculate over production and future market situation.

However, recent deregulation of financial markets has transformed the stabilizing

instrument constituted by futures contracts into a factor of instability. In its 2010 report *The Great Hunger Lottery, How Banking Speculation Causes Food Crises*, the World Development Movement observes that "deregulation that began in 2000 encouraged hyper-speculative activities by market players who had no interest in the underlying physical commodities being traded. [...] Banks such as Goldman Sachs created index funds to allow institutional investors to 'invest' in the price of food, as if it were an asset like shares. [...] These commodity index funds have since become the primary vehicle for speculative capital involvement in food commodity markets" (Jones, 2010).

Recent deregulation, especially in the United States, has favoured the creation of these new instruments and also removed quantitative restrictions on, and control over, speculative positions in agricultural futures contracts. The US Commodity Futures Modernization Act in 2000 thus exempted over-the-counter (OTC) derivatives – which are not traded on exchanges, but as bilateral contracts between private parties – from the oversight of the US Commodity Futures Trading Commission (CFTC). As a result, such trading was allowed to take place without any position limits, disclosure requirements or regulatory oversight (Mittal, 2009).

This 'modernization act' helps explain why the number of futures and options traded globally on commodity exchanges increased by more than 500 per cent between 2002 and 2008. The value of outstanding OTC commodity derivatives grew from US\$ 0.44 trillion in 1998 to US\$ 0.77 trillion in 2002 and to more than US\$ 7.5 trillion – half the size of US GDP – in June 2007 (De Schutter, 2010). Between 2006 and 2008, it is estimated that speculators dominated

long positions in food commodities. For instance, speculators held 65 per cent of long maize contracts, 68 per cent of soybean contracts and 80 per cent of wheat contracts (Jones, 2010). This massive expansion was made possible by the arrival of non-traditional investors, such as pension funds, hedge funds, sovereign wealth funds and large banks that started dealing in the commodity index instruments mentioned above (Kerckhoffs et al., 2010).

The major problem posed by these commodity index funds is that money moves into and out of derivatives due to factors unrelated to the supply and demand for a particular commodity, creating financial bubbles and destabilizing commodity markets. This led the UN Special Rapporteur on the Right to Food, along with number of NGOs and government officials, to call for a comprehensive reform of the global financial system in order to protect food security, particularly within poor, net food-importing countries. Two main sets of actions have been identified to curb speculations on food commodities on financial markets.

Ensuring transparency

In contrast to what happens in an exchange, where who is selling what for how much is clearly visible, most future contracts are currently set in private through OTC instruments. The resulting opacity makes it impossible to know how much of what is being traded and to identify the actors involved. This contributes to the uncertainty of the food market and benefits financial speculators rather than serving farmers and actual food traders.

Ensuring that such trading is registered and cleared in a fully transparent manner through exchanges would have a stabilizing effect on commodity markets. Registering such trades is also a necessary step to obtain real-time information, enabling adequate control and regulation of these markets.

State regulation

The US CFTC must be given back its regulatory role and the capacity to enforce 'position limits' to restrict the amount of financial speculation possible in a particular commodity market. The CFTC has not played its role in recent years, which has allowed financial speculators to operate on food commodity markets without any limit.

Europe does not yet have such a market regulation mechanism, but it is hoped that the regulation system proposed by Michel Barnier, the EU Commissioner for Internal Market and Services, in September 2010 will be adopted (EC, 2010). Barnier's proposals would impose mandatory reporting and clearing of OTC derivatives and set a number of rules that would place obstacles in the path of index speculators' participation in commodity index funds.

Regulation could go beyond setting limits and rules. As certain experts have suggested, one could simply ban commodity index funds, which do not provide liquidity that favour investment the way 'traditional' hedging and speculation in commodity markets used to. They are instead a source of instability and, as such, could be easily removed by governments (Jones, 2010).

The problem of speculation is well recognized and relatively simple solutions have been identified. However, as observed by the World Development Movement, it is to be feared that "the corporate lobby [including banks such as Goldman Sachs] will act to maintain their ability to make vast profit out of unregulated trading in commodity derivatives" (Jones, 2010). London is host to the highest amount of commodity trading outside the United States and the recent opposition to EU regulation of hedge funds by the United Kingdom's Treasury highlights the importance of this concern.

bad harvest in one major food-producing country may give a signal to speculators who are then likely to accentuate price fluctuations by their operations, much more than if the market were responding only to the information about supply. Similarly, the first signals of a price increase on the global market may lead a country – its government or private traders – to proceed to purchase in order to secure supplies at a low price, which in turn increases inflation.

Several of the factors of volatility identified above can be tackled through adequate measures and policies:

- Measures in favour of food production and stocks, including through international assistance to low- and middle-income countries, are likely to reduce pressure on the global food markets.
- Measures to limit speculation through the regulation of financial markets and restrictions imposed by governments on certain financial products can do the same.
- Policy changes in rich countries (including the EU and the US), which have favoured the development of agrofuels, can slow this expansion – for example, by abandoning agrofuel targets and subsidies, as well as by imposing fiscal measures that could discourage the expansion of these energies.

A number of non-governmental organizations (NGOs), experts and even some heads of state (for example, President Sarkozy of France) have already advocated that such measures be taken by governments to reduce the instability of food markets (De Schutter, 2010; Jones, 2010).

However, some of the most powerful forces at play in today's globalized world drive several of the factors explaining volatility: the energy security of rich nations; the political instability in a number of oil-exporting countries; the profit-driven practices of financial corporations; and the weather hazards resulting from climate change. Furthermore, rich countries are the main grain exporters, i.e., those who take advantage of high food prices on international markets and also those who have the power to reduce volatility through their policies on financial regulation, agrofuels, international aid to low- and middle-income countries and climate change.

It therefore seems unlikely, even if the political will existed, that all the factors affecting volatility could be tackled effectively and simultaneously in the short run. Although periods of stability are to be expected, the global volatility of food prices is here to stay. No government can assume today that the global market will ensure an adequate supply of food at affordable prices for its people in the future. This represents a major departure from the conventional wisdom that has dominated policies in the past 30 years, namely, that low and stable food prices would prevail. Such a departure will have important policy implications for all governments and international actors fighting food insecurity and poverty.

Lessons learnt from the responses to the 2007–2008 crisis

Since 2007, governments and international organizations have put in place a number of measures to respond to high food prices. But how effective and relevant have these responses been?

The 2008 global food crisis was less 'global' than generally thought. A number of countries were successful in preventing price transmission to domestic markets. For example, the price of rice actually decreased in Indonesia in 2008 while it was escalating in neighbouring countries. Public interventions to prevent this transmission were a mix of trade facilitation policies (for instance, cutting import tariffs or negotiating with importers) and trade restrictions or regulations (such as export bans, use of public stocks, price control and anti-speculation measures).

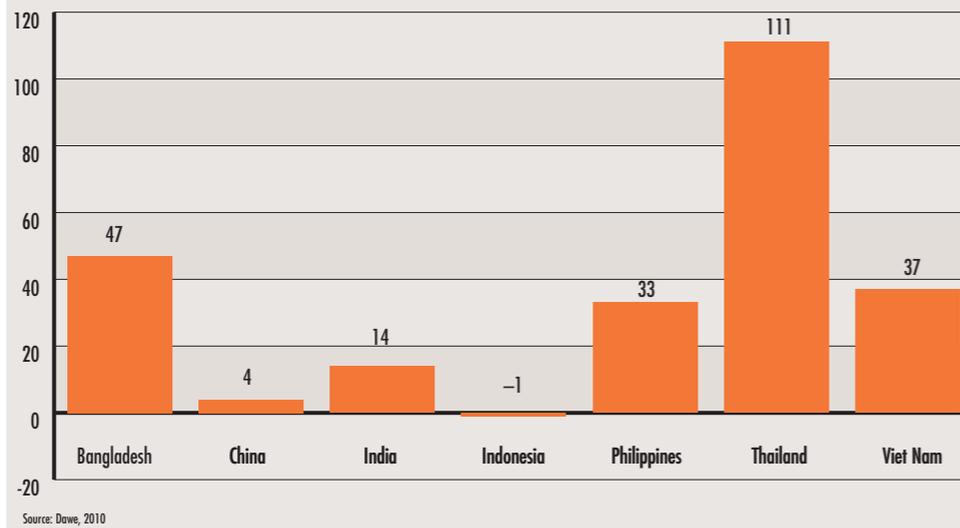
Analysis by an FAO economist shows that the price transmission from world to domestic markets varied from country to country in Asia (Dawe, 2010). From the second quarter of 2007 to the second quarter of 2008, real domestic prices increased by more than 30 per cent in Bangladesh, Philippines, Thailand and Viet Nam while others had much lower inflation: China (+4 per cent), India (+14 per cent) and Indonesia (-1 per cent) (see Figure 3.4).

This analysis determined that the main factor behind this difference was the governments' attitude towards trade, i.e., countries limiting exports and deciding the volume of trade in order to preserve availability of food domestically. Thailand, which never banned exports during the crisis, saw the largest variation of prices at 132 per cent in early 2008.

Research conducted by the Netherlands' Wageningen University in East Africa showed that, in the same way, food prices decreased in Tanzania in 2008 while they increased in neighbouring countries (Meijerink et al., 2010). The main reasons were a combination of good harvest, import facilitation and export bans.

The success of measures taken to limit domestic inflation depended primarily on governments' ability to control domestic availability and regulate markets, often based on pre-existing public systems. Export restrictions, especially on rice, were certainly responsible for increased inflation in global food markets and adversely impacted food-importing countries which could no longer buy from traditional suppliers. For instance, Pakistan's restrictions affected Afghanistan, Indian restrictions affected Bangladesh and Nepal, and Tanzania's export ban affected Kenya. Nevertheless, these measures appear to have constituted a fast and effective way to protect consumers by mitigating the effect of global markets on domestic prices.

Figure 3.4 Increase in real prices of rice, Q2 2007 to Q2 2008 (%)



Other factors also helped limit price transmission for a number of countries, including low reliance on international trade and availability of large public stocks, which reduced the likelihood of speculation and hoarding. A clear message from governments plus sound policies prevented speculation and panic among domestic farmers, traders and consumers.

A little-discussed response was the role of remittances sent by migrants to their families struggling to cope with high food prices (see Box 3.3).

Box 3.3 Remittances and kinship at the forefront of the response

The plethora of international conferences and summits that focused on policy responses to high food prices and international assistance to poor countries has tended to ignore the fact that the burden of the rise in 2007–2008 prices was borne by the poor. Remittances by migrants played a key role in helping their families and communities to cope with the

increased food costs. Recorded remittances totalled close to US\$ 340 billion in 2008, a 40 per cent increase compared to US\$ 240 billion in 2007. The true size of remittances, including unrecorded flows, is believed to be even larger (Ratha et al., 2007), amounting to more than US\$ 500 billion in 2008 (ABC, 2008). In 2008, recorded remittances were

about three times the annual amount of overseas development assistance provided to low- and middle-income countries by rich countries and constituted the second largest source of external funding after foreign direct investment.

According to Oxfam, remittances to Nepal, for example, increased by 30 per cent in 2008 (Oxfam, 2010). Figure 3.5 shows a similar evolution for Bangladesh. For sub-Saharan Africa, remittances jumped from an estimated US\$ 13 billion in 2006 to above US\$ 20 billion in 2008, i.e., an increase of more than 50 per cent in two years. Oxfam’s findings are corroborated by a 2008 study published by the World Food Programme on migration in Nepal entitled *Passage to India: Migration as a Coping Strategy in Times of Crisis in Nepal*. The study found that 64 per cent of the very poor and 62 per cent of the poor said that they would migrate after a price shock. Many said they would change their mind if they had sufficient access to food or were guaranteed full employment for three months (WFP, 2008).

A number of studies also indicate that different forms of help, such as borrowing from relatives or neighbours, or securing credit, was one of the most widely used mechanisms to cope with high food prices. For instance, a national survey in Cambodia found that, along with cutting expenditure on meals, 70 per cent of the people responded to higher food prices by borrowing in cash or kind (Compton, 2010).

The level of remittances slightly decreased in 2009 as a consequence of the economic crisis in the rich countries. In Bangladesh, remittances declined by 9 per cent in February 2009 when large numbers of migrant workers were sent home, mainly from the Gulf states. Ghana experienced a 16 per cent decline in remittances compared to the previous year (WFP, 2008). However, at US\$ 317 billion, the global sum of remittances in 2009 was

still higher than before the 2008 crisis (World Bank, 2009b). Following the 2009 slowdown, remittances rose again, reaching US\$ 325 billion in 2010 (World Bank, 2010).

Figure 3.5 Remittances and rice prices, Bangladesh, June 2006–December 20



Despite its importance, especially in times of crisis as in 2008, the issue of remittances remains a marginal area of research, advocacy and policy work. People’s own responses to high food prices go mostly unnoticed by policy-makers and practitioners, who tend to focus on international assistance or foreign investments.

There are a number of possible ways to maximize the impact of remittances and thus favour a form of assistance that is based on work and community solidarity mechanisms. In its 2006 report *Economic Implications of Remittances and Migration*, the World Bank observed that the “remittance fees are high, regressive, and non-transparent, and reducing remittance fees will increase remittance flows to developing countries” (World Bank, 2006). This study suggested that decreasing the cost of each transaction by as much as 33 per cent would still produce profits for some of the companies involved in the remittances business. It also found that a 12 per cent reduction in remittance costs could result in an increase of up to 11 per cent in remittance flows to low- and middle-income countries. Such an increase, worth more than US\$ 3 billion, would represent the

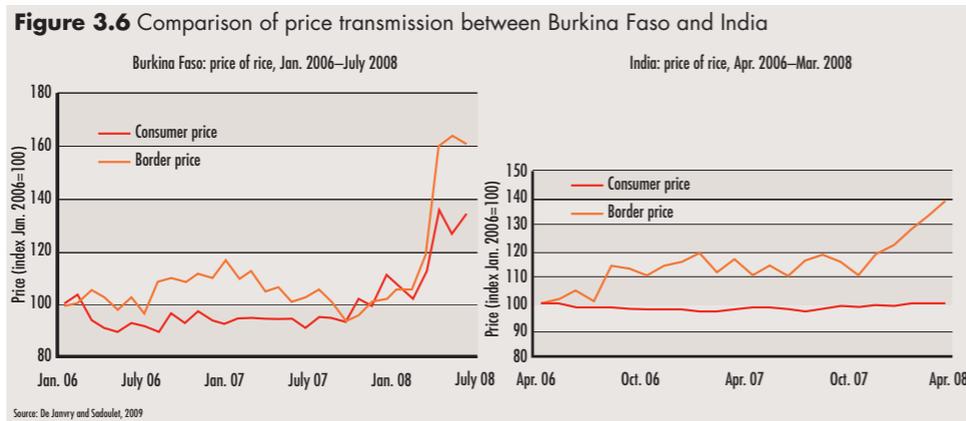
equivalent of the total international development assistance spent by rich countries in rural development and agriculture in the developing world.

Some NGOs are, therefore, campaigning to cut profit margins (as high as 20–30 per cent) in the lucrative industry devoted to money transfers, which generates more than US\$ 15 billion in annual revenue (TIGRA, 2011). The World Bank has also identified a number of other options to increase the potential of remittances to help poor people in developing nations (World Bank, 2006). These include simplifying and harmonizing regulations relating to remittances; encouraging competition in the remittance market; improving access of smaller remittance service providers such as credit unions and larger microfinance institutions; and improving the access of undocumented

migrants to formal remittance channels, especially banks.

The latter highlights the question of immigration, which is often ignored in humanitarian and development discussions. Yet the socio-economic conditions of migrants and the legal and fiscal arrangements in host countries constitute important humanitarian issues. This was evident in the aftermath of the 2010 earthquake in Haiti, when intense debates took place in Canada and the French island of Guadeloupe about allowing more migrants as a humanitarian measure.

Immigration and remittances have already become humanitarian issues in the globalized world. It is up to humanitarian actors and advocates to engage, research and reflect upon these issues in order to identify the best ways to integrate them into advocacy work.



Moves to reduce taxes and tariffs on food imports had limited impact because tariffs are already generally very low in most countries as a result of economic liberalization. Besides, they result in net losses in fiscal revenues for governments.

Overall, large and middle-income countries had a greater capacity to restrain transmission of global price shocks to domestic markets than poor countries. This is well illustrated in Figure 3.6, which compares real border prices and consumer prices for rice in Burkina Faso and India, with strong transmission in the first but very limited in the second.

Price volatility in Burkina Faso reflects a common feature in many countries in sub-Saharan Africa, where food prices have remained high and volatile, indeed often higher than international prices after the peak of mid-2008. This pattern varies between countries depending on their production and consumption particularities. Inflation in the rice market was, for instance, much lower in Mali than in Burkina Faso in 2008 because Mali produces rice and is less dependent on imports (Abbott, 2010).

While international prices went down after July 2008, local prices in a number of countries such as Malawi, Mozambique and Zambia continued to rise for almost a year after the global price peak, then fell back in 2009. They still ended up 60 to 70 per cent above their January 2007 levels (RHVP, 2010). In many poor countries, especially in sub-Saharan Africa, seasonal volatility, due to a combination of domestic and international factors, is significant and constitutes a threat to the livelihoods of millions, regardless of the level of prices (Devereux et al., 2008a). This volatility of domestic prices actually overshadows international price instability as an urgent policy issue for many African countries.

High food prices required a reassessment of safety nets

With uneven success, many governments have tried to protect their poor citizens through large-scale safety net systems. Some in Asia, such as in India or Indonesia, have found important synergies between social protection for the poor and support provided to food production, generally tied to the management of public stocks.

Cash transfers to consumers can be very effective in addressing hunger, due especially to their multiplier effects on the economy and stimulation of local food production and trade. Cash transfers have been increasingly used as safety nets in recent years (see Chapter 4). However, high food prices undermined the value of the transfers and ultimately the effectiveness and relevance of the instrument. Thus, some national programmes could not be adequately adjusted to high prices, which resulted in a dramatic drop in beneficiaries' purchasing power. This was the case in Ethiopia (see Box 3.4). Similarly, in Bangladesh, spending on safety nets only increased by 25 per cent to compensate a 48 per cent rise in rice prices (World Bank, 2009).

Box 3.4 Ethiopia's PSNP struggles to adjust to high food prices

The Ethiopian Productive Safety Net Programme (PSNP) is the largest in Africa. The Ethiopian government set it up with international support in 2005 to help tackle the country's chronic food insecurity in a more effective way. Prior to its establishment, Ethiopia was subject to

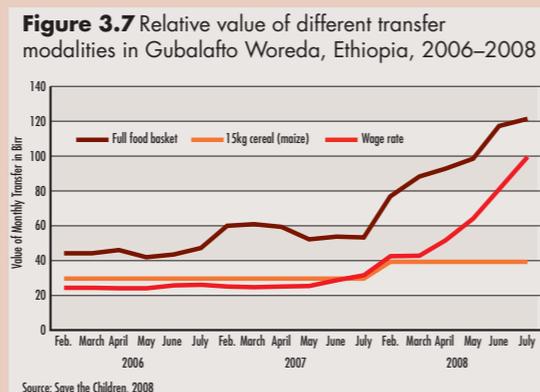
recurrent food emergencies, which occurred every other year or so and to which international donors and organizations generally responded through late but massive relief operations and large amounts of international food aid. This practice was recognized as costly and inefficient, with potentially important side-effects on local food producers. The PSNP relies on the long-term commitments of government and donors, which has made aid more predictable. Cash or food transfers are delivered via a permanent mechanism, led and budgeted for by the government.

In 2010, the PSNP was estimated to reach more than 8 million chronically food-insecure people – about 10 per cent of the population – a difficult undertaking for a poor but geographically large country like Ethiopia (USAID, 2010).

The PSNP aims to protect the assets of vulnerable households and to provide them with access to food by offering predictable transfers of cash and/or food. In 2007, 57 per cent of programme resources were provided in cash, with the remainder provided in food (MoARD, 2008). The programme's public works component aims to improve community assets such as roads, schools and water sources.

The resources provided by the programme are generally just sufficient to meet people's most basic needs. In theory, the combination of food and cash should allow flexibility in people's response to the market situation. However, this did not happen in 2008, when the PSNP provided mostly cash transfers, despite people's need for in-kind aid once food prices started to increase. The cash component of the programme proved to be insufficient due to high inflation in 2008. As shown in Figure 3.7, the value of cash transfers increased by only 33 per cent in 2008, which was far from keeping up with the 300 per cent increase in the cost of the food basket (Save the Children,

2008). This mismatch required the setting-up of a massive humanitarian operation in parallel with the PSNP.



It is difficult to imagine that a large-scale programme such as the PSNP could ever have been fully inflation-indexed, especially in the context of important seasonal fluctuations and resource constraints. As a 2008 study by Save the Children observed, "A one birr adjustment in wage rate results in a US\$25 million increase in the cost of the PSNP per year. There are similar implications in providing a greater proportion of transfers in food. Therefore, any increase in the wage rate and in the proportion of food in the PSNP will exacerbate already existing funding deficits and undermine PSNP predictability in both the short and the long-term [*sic*]" (Save the Children, 2008). International donors provide about US\$ 500 million a year to the PSNP. Adjusting the programme to a 200 per cent increase in food prices would cost several hundred million dollars simply to cover those already benefiting from the programme; it would cost even more if the programme were to reach all those pushed into food poverty as a result of high prices.

The initial aim of the programme was to allow 'graduation' out of aid dependency through a combination of predictable cash and food

provision and the creation of assets. To date, the programme has helped only a few people effectively to graduate out of aid dependency. By 2008, it had allowed many to become more resilient to shocks, with beneficiaries' incomes doubling over a two-year period, whereas incomes of non-beneficiaries declined during the same period (Devereux et al., 2008b).

When food prices increased dramatically in 2008, the PSNP undoubtedly served as a

buffer. However, the overemphasis on cash resources, the lack of flexibility to adjust and scale up activities and the stand-alone nature of the programme (it is not linked to a system of food reserves which could have allowed a swift adjustment through an increase in the share of food commodities provided to PSNP beneficiaries) have clearly shown the limits of the programme as originally designed.

Combining cash with food in safety net programmes and indexing cash transfers on inflation are valid options for sustaining the effectiveness of safety nets and protecting livelihoods against price fluctuations. However, they seem insufficient to deal with situations of high price volatility as seen in recent years. This makes it necessary to consider combining these options with some price stabilization measures and with stock mechanisms through which food can be procured early enough, when food is available and prices are low.

The higher cost of food aid

Food aid programmes were used to respond to high food prices in dozens of poor countries. However, high food and oil prices dramatically raised the operational costs of the World Food Programme (WFP) and limited the potential to expand such programmes at a time when it had become much more expensive to buy and transport food commodities. While its resources increased by US\$ 2.3 billion or 85 per cent in 2008, extra operational costs limited WFP's ability to expand its operations to the same extent. The number of WFP beneficiaries and the tonnage distributed increased by only 19 per cent and 18 per cent respectively between 2007 and 2008 (WFP, 2009a).

WFP's historic budget increase in 2008 allowed the programme to reach a total of 100 million people, an increase of some 20 million (WFP, 2009b). However, this number is modest when one considers that high food prices added another 109 million people to the ranks of the undernourished. International food aid, therefore, appears necessary and important for the millions of people who are able to meet their food needs through such programmes, but far from sufficient to cope with the amplitude of world hunger and the effects of high food prices.

The different paths of the agricultural responses

When food prices went up, many policy-makers realized the importance of increasing food production as a way of taking advantage of the good market prospects to increase sales and exports or to decrease dependency on unaffordable and uncertain food imports. The nature and amplitude of responses in support of boosting food production following the 2007–2008 price increases varied among countries, depending on available resources, external support received and policy objectives.

Many countries were successful in raising production levels through a variety of interventions, such as:

- Tax waivers, vouchers, subsidies or distributions of agricultural inputs
- Tax waivers or subsidies on fuel for irrigation
- Price support to producers (guarantee of minimum prices)
- Public procurement for food distribution, subsidized sales and national stocks
- Support to credit and insurance, cancellation of farmers' debts
- Support to value chain management and market information
- Support to irrigation and storage infrastructures.

The most common policy response in agriculture was the provision of agricultural inputs. The provisional estimate for Africa's short-term needs due to high food prices, made by the Comprehensive Africa Agriculture Development Programme in May 2008, was US\$ 1.29 billion, including US\$ 112 million for seeds and US\$ 749 million – nearly 60 per cent of the total – for fertilizers (NEPAD, 2008). Through its Initiative on Soaring Food Prices, FAO distributed agricultural inputs to some 370,000 smallholders in more than 80 countries. Of the 40 countries assisted under its Global Food Crisis Response Programme, the World Bank provided 20 with agricultural inputs. For several of them, such as Benin, Ethiopia, Nicaragua, Niger and Rwanda, inputs represented 90 to 100 per cent of the funding (World Bank, 2009).

In countries with public procurement systems in place, such as Bangladesh and India, the governments were able to support farmers by procuring rice at a higher price and providing subsidies to poor and marginal farmers to mitigate higher costs of production for irrigation and fertilizer. In Bangladesh, the higher procurement price combined with an increase in procurement for public food stock from 1 million tonnes to 1.5 million tonnes contributed significantly to the bumper *boro* (rice) harvest, as farmers took this as a big incentive and increased their production (World Bank, 2009a).

In such countries, these actions in the agricultural sector aimed to ensure that enough food was produced to feed the population and reduce tension on prices as well as to sell food to the poor and low-income groups at subsidized prices.

A boost to regional integration

It is easier to put some policy responses into place in large countries – e.g., trade facilitation and market regulation – than in smaller countries in sub-Saharan Africa. Borders are often porous, with cross-border movement of food or cattle well integrated in a regional economy; this makes it difficult for individual countries to intervene effectively.

This explains to some extent why high food prices have favoured an acceleration or a revitalization of regional integration processes, including policy dialogue (e.g., around cross-border trade) and the development of common instruments such as food reserves. In West Africa, the implementation of the common agricultural policy was revived and boosted; it had been prepared for the region in 2005 but never implemented.

As in other regions of Africa, the strong interdependence of West African countries, their high level of regional integration and the limited capacity of most of them to address the volatility of food prices on their own, make it necessary to develop common policies and mechanisms to ensure the availability of affordable food for all in the region. For most countries in sub-Saharan Africa, regional integration appears to be the only way to implement ambitious agricultural policies and enhance their bargaining position with rich countries and international institutions.

The way forward: regulation, social protection and food production

The measures needed to limit the volatility of food prices at the global level are known. However, people in low- and middle-income countries cannot trust rich countries to take the necessary decisions, in particular regarding their support to agrofuels or the regulation of financial markets, where such decisions conflict with their economic interests and their energy security. Furthermore, even if adequate measures were taken tomorrow at the global level, major elements of uncertainty would remain, such as the price of oil, which has become a determinant for food prices, or weather hazards which can affect production and world trade at any time. This makes it critical to abandon trust in the ability of global food markets to supply cheap food, a dominant assumption of policy-makers for decades.

Giving up this assumption requires a revival of sound food and agriculture policies in low- and middle-income countries so that they can reduce their vulnerability to the fluctuations of global markets. The review of the responses to high food prices in 2007–2008 provides some useful lessons that can inform the design of such policies.

Our argument suggests that dealing with high food prices on the global markets is always easier for countries with resources, institutions and public mechanisms in place to support food production, manage domestic availability of food and prevent the transmission of global prices to their domestic markets. It also demonstrates that providing

aid – food or cash – to the poor, however important, is an insufficient defence against hunger in those countries unable to limit domestic food price inflation.

In recent years, the development of safety nets has often been confined to the sole establishment of cash or food transfer programmes targeting vulnerable groups. Yet broader models have been in place for years, with apparent success in countries where social protection was developed through a comprehensive, more integrated approach to food security. For instance, in Brazil, family farmers benefit from credit, insurance schemes, technical assistance and a food procurement programme that buys food from them for redistribution to the poor, along with cash transfer programmes (MDS, 2008; see also Chapter 4).

Public distribution systems, used in response to the high food prices in Bangladesh, India or Indonesia, are primarily supplied by purchases from farmers. The system provides farmers with a minimum price for their crops and, therefore, some insurance over their investment in production. Such programmes stabilize prices, support farmers' incomes and provide food for the public distribution system. Furthermore, unlike imported food aid, which may undermine local agriculture, domestic procurement of food reserves can greatly benefit local farmers.

The high cost of integrated public systems like those in place in certain Asian countries has often been cited in favour of the liberalization of the food and agriculture sectors. But there are solutions to limit the cost of holding physical stocks. Food reserves may be combined with financial reserves for the procurement of food. There is also room for innovation in the way governments manage food availability and regulate markets. As described in this chapter, regional systems have an important potential, especially for a number of small and interdependent African countries. Other innovations include instruments – such as purchase options guaranteeing capped or fixed prices for food imports – which have been successfully introduced by countries like Malawi in recent years (Dana, 2007).

Finally, the cost-effectiveness of public mechanisms is difficult to evaluate given their multiple objectives; the cost argument needs to be reassessed in an era of volatility. Such reassessment should consider the benefits of regulatory public intervention in these sectors for the people, the economy and the vitality of the agricultural sector. Ethiopia's costly PSNP (see Box 3.4) is an illustration of the sort of undertaking that is possible in resource-poor African countries when the vision and the political will are present.

Chapter 3 was written by Frédéric Mousseau who is Policy Director at the Oakland Institute, California, United States. He has worked for almost 20 years with international agencies such as Action Contre la Faim, Médecins Sans Frontières and Oxfam International. He also wrote Boxes 3.2, 3.3 and 3.4. Box 3.1 was written by Adam Barclay, a science writer who specializes in international agricultural research.

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