**Case Study 9. The food price crises of 2007-09 and 2011**

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| **Abstract**  The ‘food price crisis’ of 2008 provided a shock to the existing food system in the world. In developing countries, millions were tipped into deeper hunger and undernutrition, or food insecurity for the first time. The food prices rise was in response to events such as weather shocks, increased oil prices and increased demand for biofuels. The price rise was exacerbated by the simultaneous 2008 global financial crisis. FAO and the European Union led the effort to mitigate the effects of the more expensive food, largely by promoting a supply response. The prospect for long-term dampening of the causative conditions is discussed, whilst highlighting what may be the major cause of future food shortages and price rises, namely global warming, and the imperative for this to be addressed more urgently. |

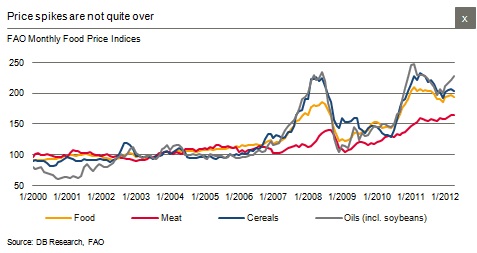
Key words:Food Price Crisis; weather shocks; increased oil price; biofuels demand; global financial crisis; supply response from donors; Oxfam pressure point map; response to crisis; EU Food Facility and FAO

9.1. Introduction

In 2007, world-wide food prices started to rise at a rate not seen for thirty years, and they kept rising. By 2009 they had started to decline again, yet by December 2010, the FAO World Food Price Index[[1]](#footnote-1) rose above its 2008 peak, with January 2011 seeing the highest ever level of food prices until then, this sparking riots and political turmoil around world. According to the IMF (IMF, 2011), increases in international food prices in Low Income Countries lead to significant deterioration of democratic institutions, and increase in the incidence of anti-government demonstrations, riots, and civil conflict. For every 10 percent increase in global food prices IMF estimates there to be a 100 percent increase in such anti-government protests.

Because the world has become accustomed to these higher prices, the levels are often not termed a ‘crisis’ any more. Nevertheless, economic access to food for many people remains at crisis level, restricting the types of food which poorer people can buy, and the amounts. Unwelcome aspects of price level movements include their volatility and unpredictability.

Coupled with the simultaneous global economic downturn, FAO estimates that the 2007/08 food price spike contributed to an eight per cent rise in the number of undernourished people in Africa. Price rises in the second half of 2010 caused further turmoil, contributing to an increase in the estimated number of hungry people globally, reaching 925 million (FAO, 2011b). This affected developing countries disproportionately hard, as they contain some of the world’s poorest people who, even without a ‘food price crisis’, already spend between 60 and 80 percent of their meagre income on food. Millions were pushed deeper into poverty and undernutrition than they were before, whilst additional millions were dragged into undernutrition for the first time. As shown in Figure 9.1 below, the cereals and oils components of generic ‘food’ have exhibited the greatest amplitude in price fluctuations, these being the key ingredients in the diet of poor people, thereby making their food security so vulnerable.  
  
Figure 9.1. ‘Price spikes are not quite over’

  
Source: Schaffnit-Chatterjee, C. (2012a). Food prices: food price index up in Q1 but wheat and rice under downward pressure. Research briefing – economics, markets, politics. Deutsche Bank Research (with permission).

FAO recorded a 45 percent increase in the Food Price Index during the 2008 food crisis. Relative to 2007 levels, wheat prices rose by 130 percent, soybean by 87 percent, rice by 74 percent and corn (maize) prices by 31 percent. From July to September 2010, an even higher peak was in the making, wheat prices rocketing in response to heat- and drought-fuelled grain crop losses in Russia in 2011 and a subsequent export ban by the Russian Federation. Rice and corn prices also rose during that period. By December 2010, the FAO Food Price Index had topped its 2008 peak, with sugar, oils and fats increasing the most. In March 2011, the index dropped for the first time after eight months of continuous price spikes. The index dropped to an 11-month low in October 2011, though in 2015 the cost of basic food staples in many developing countries remains far higher than in 2006. Food prices have hovered near an all-time peak since late 2010, cereal prices in January 2011 almost two and a half times higher than at the turn of the Millennium. This has sent tens of millions of people into poverty, and the underlying factors driving them higher seem here to stay.   
  
Population growth and the rapidly growing middle class in the developing world are pushing demand for grain-intensive animal protein ever higher, while rising energy costs are raising production and supply costs. Global grain inventories have fallen sharply since the turn of the century as a result - wheat stocks are down by almost a third, rice by more than 40 percent, and corn by a half (Anderson, 2012). These stocks are unlikely to increase, for even in a good year the consumption demand is only just met. Those living in *developed* countries will be relatively unaffected, as produce in the shops is far removed from the raw commodity – the cost of wheat is a fairly small component in the cost of a loaf of bread, for example. However, the impact on the price of meat is more pronounced, as 5kg of grain are needed to produce 1kg of animal protein, on average. For those living in poverty in the *developing world* though, those who need to buy the raw ingredients to make their own food, and who spend a higher proportion of their income on food, the impact of global grain shortfall can be far greater, if that grain cannot be grown locally instead.

An interactive map produced in 2011 by Oxfam International shows how poor communities across the world are being hurt by high and volatile food prices. The ‘food price pressure points’ map offers a global snapshot of the impacts of the global food price crisis. The map shows countries that are highly vulnerable to price spikes which have contributed to violence or unrest, or which have suffered extreme weather events that have contributed to price hikes. Examples of impacts that the map displays include:

* Pakistan: nearly two-thirds of the population spend between 50 and 70 percent of their income on food, making them vulnerable to rising prices
* Tanzania: despite a strong economic performance, more than half the population lives in extreme poverty and is vulnerable to increasing food prices
* Mozambique: in 2010, after record harvests, Mozambique was still set to import almost a quarter of its food, this import dependence leading to food price volatility

The higher food and fuel prices of 2008 and beyond have affected the economy of Liberia more than that of any other country in sub-Saharan Africa, coming as an additional stress on a country already stressed-out. Its agriculture sector, that once employed 75 percent of the workforce, has been reduced to subsistence level by the civil wars which finished in 2003, the country still faced with the huge challenge of peace building and reconstruction. The agricultural sector is characterised by low productivity (only 0.8t/ha for rice), lack of access to critical production inputs, weak marketing systems, the war-related displacement of much of the population and fear of future civil unrest, creating the syndrome of ‘displaced persons apathy’.  
  
9.2. Origin of the food price crises

As the Oakland Institute (2014) points out, food prices rise in response to events such as weather shocks, higher oil prices and increased demand for biofuels, such as corn ethanol. Oil price increases affect not only the cost of transportation but the price of fertilizers. Yet, while these short-term causes of the 2008 and 2011 crises are well-established, some experts believe that the apex cause was flawed trade agreements and heightened food commodity speculation. Following the 2008 financial crisis, many investors shifted funds from mortgage markets into agricultural commodities, creating another demand shock that increased food prices. Additionally, since the 1980s, many countries such as Zimbabwe have moved from being largely self-sufficient in food to being net food importers, this increasing their exposure to supply and price risks initiated abroad.

Bobenrieth and Wright (2009) examined the importance of trade agreements and food commodity speculation, and concerns that the world had entered a new grain market regime in which such volatility would persist unless strong policy measures are adopted. The fear is that such trading has undermined the price-smoothing capacity of agricultural futures markets, and increased the price risks encountered by consumers, producers and governments. Their conclusions, however, were that the grain price spikes of 2007/2008 are not unusual, in the context of history of cereal grain price movements over previous decades. Excluding the role of China in world cereal exports, upward price spikes had occurred during periods of unusually low levels of aggregate grain stocks. The data showed no evidence of a new market regime or of perverse effects from international financial speculation. Trends in demand due to higher incomes in populous China and India, biofuel mandates[[2]](#footnote-2), poor harvests and increases in petroleum prices all played a part in explaining why stocks were low during 2007/2008. Furthermore, imposed export restrictions rendered discretionary stocks less effective in stabilizing the market.  
  
9.3. Response to the crises

As early as July 2007, FAO had warned of the then developing food price crisis, and in December 2007, launched its Initiative on Soaring Food Prices (ISFP) to help smallholder farmers grow more food and earn more money. The various national policy responses - market and trade measures, safety net programs and production support measures - aimed at easing the high price burden, were comprehensively reviewed by FAO (2009d). That report considered the macro-economic implications of those interventions, and the extent to which prices were contained relative to international prices.

FAO has also worked closely with the UN High-Level Task Force on the Global Food Crisis to produce the Comprehensive Framework for Action, a global strategy and action plan designed to soften the immediate impact of high food prices and address longer-term measures for sustainable food security. Moreover, FAO has provided policy advice, and scaled up its monitoring of food prices, at country, regional and global level through its Global Information and Early Warning System on Food and Agriculture (GIEWS).

In mid-2008, FAO launched a series of one-year emergency projects, providing smallholder farmers with improved seed varieties, fertilizers, tools and technical assistance to help them rapidly boost their food output. This early support served as a catalyst for leveraging additional funding. In 2009, FAO began carrying out projects in 28 countries in Africa, Asia, Latin America and the Caribbean through the € 1 billion EU Food Facility (EUFF)(see Chapter 4.4 in the companion book).

Many of the emergency measures cited have been supported through FAO’s own funding, in the form of Technical Cooperation Program projects, totalling USD 37.3 million. The European Union contributed USD 314 million to FAO through the EU Food Facility. Other donors to the ISFP include: Andorra, Austria, Belgium, Italy, the Netherlands, Spain, Sweden, the United Kingdom, the United States, the UN Office for the Coordination of Humanitarian Affairs (OCHA), IFAD and the World Bank.

National governments have played an important role in managing the Food Price Crisis response too. Continuing with the Liberia example mentioned in Section 9.1 above, in 2007 Liberia produced only 40% of the national requirement of the main staple, rice, and therefore relies heavily on food imports. One aspect of the government’s three-pronged strategy to support the availability and access components of food security, with donor and FAO support, is to continue to promote a rapid supply response from Liberian farmers. Even before the food price crisis, improved access to physical inputs increased grain crop yields, resulting in a near doubling of national foodgrain production from 85,000t in 2005 to 144,000t in 2007/08.

9.4. Prospects of long-term price stability, food and nutrition security

In 2012, FAO, IFAD and WFP urged that in responding to high food prices, countries must avoid panic buying and refrain from imposing export restrictions which, while temporarily helping some consumers at home, were generally inefficient. They also concluded that more investment in agriculture and social protection, including programs providing the poor with access to food, was needed (Chapters 3.6.2 and 5.5.2 in the companion book).

Bailey (2012) pointed to that year’s worst drought to hit the USA in over half a century which had sent international food prices climbing again. In early July 2012, prices for corn and soybeans (the USA being the world’s largest producer of both) passed the peaks they reached during the 2007/8 food crisis which saw the humanitarian safety net system overwhelmed by demand for food aid. *However, except mainly for China and Mexico, corn and soybeans are not the most important commodities for poor households, which typically depend more on rice and wheat*. For this reason, the authors concluded that the impacts of the 2012 price spike on hunger and poverty were likely to be limited. Instead, richer consumers would feel the pinch first: corn and soybeans are typically used in animal feed – so the price rise of corn and soybeans will be felt most by people who can afford to eat meat, and are able to adjust their consumption without going hungry. Because riots are less likely therefore, Bailey reasoned that governments would be less inclined to impose export controls, reducing the chance of a collapse in confidence, as one country after another bans exports, pushing up international prices further and encouraging others to do the same. This dynamic was a major factor in both the 2007/8 crisis and the 2010/11 spike.  
  
With the benefit of further hindsight than was possible in the study by Bobenrieth and Wright (2009) *op. cit.* mentioned above, several years beyond the peaks of 2008 and 2011, Anderson *et al*. (2013) considered the actual impact on world food prices of the changes in *restrictions on trade in staple foods* during the 2008 world food price crisis. Those changes - reductions in import protection or increases in export restraints - were meant to partially insulate domestic markets from the spike in international prices. However, the authors found that this insulation added substantially to the spike in international prices for rice, wheat, corn, and oilseeds. As a result, although domestic prices rose less than they would have without insulation in some developing countries, in many other countries they rose more than they would have in the absence of such insulation. The authors also identified a tendency for the combined impact of such insulating behavior to *increase* global poverty in 2008. Since there are domestic policy instruments, such as conditional cash transfers, that could provide social protection for the poor far more efficiently and equitably than variations in border restrictions, the authors suggest it is time to seek a multilateral agreement to quell any temptation to change restrictions on trade when international food prices spike.  
  
Considering the range of short-term drivers, indications are that food prices will remain high for the remainder of the current decade, with spikes expected with increasing frequency in future (Schaffnit-Chatterjee, 2011). The World Bank (2014f) has also cautioned that high food prices are the new ‘norm’. Managing this volatility will require sustained commitment, co-ordination, and vigilance from the international community to help governments put policies in place to help people better cope. Some countries with high poverty and weak safety nets tend to respond to chronic price volatility by scaling up consumer food subsidies, this often being counter-productive. When faced with high food prices, many of the poorest families cope by pulling their children out of school and eating cheaper, less nutritious food, which can have catastrophic life-long effects. Undernutrition contributes to infant, child and maternal illness; decreased learning capacity; lower productivity, and higher mortality. One-third of all child deaths globally are attributed to undernutrition, and up to 80 percent of our brain architecture develops during the first 1,000 days of life (see Chapter 2 in the companion book).

9.5. Double jeopardy: when food prices go up and purchasing power goes down

As pointed out by Oxfam (2012), when a weather event drives local or regional price spikes, people living in poverty often face a double shock, having to cope with higher prices at a time when the direct effects of the weather may have also depleted their assets, destroyed their crops or stripped them of their livelihood. The 2011 emergency in the Horn of Africa and the 2012 Sahel food crisis show how this toxic mix can bring about hunger on a mass scale. Pastoralists and small-scale subsistence farmers were hit hard in both regions, where the loss of livestock and crops had diminished available food and drastically reduced the value of their assets so that they could not afford to buy food either. This was shown in the declining terms of trade experienced by pastoralists across the Sahel: in June 2011 in Bandiagara, Mali, a sheep was exchanged for 267 kg of millet, whilst a year later it attracted only 126 kg.

When grain prices do rise suddenly, poor farmers may be unable to take advantage of rapid price increases through growing more to sell, as they lack access to credit, land or other inputs needed to expand production. Furthermore, many small farmers are net food consumers, so that when prices increase, they are worse off. Finally, volatility makes it hard for poor farmers to invest, for as they do not have access to hedging instruments, they are unable to bear the risk of a future collapse in prices.

To facilitate such a ‘hedge’ against future food price crises, FAO, the European Commission and others agree that efforts need to be scaled up at all levels to strengthen the *resilience* of small farmers to future shocks (market volatility, financial crises and natural disasters) and to boost agricultural productivity to improve food and nutrition security over the long term. To this end, FAO is working with governments to promote food availability, through making sure farmers have sustained access to quality seeds, fertilizers and tools as well as technical assistance, training and credit. FAO is also supporting work to improve rural infrastructure such as roads, irrigation systems, storage and market facilities, and to promote better management of water and land resources. Furthermore, FAO is advocating for increased investment, via Official Development Assistance (ODA), public spending and private investments, as a means to get agriculture back on track in the fight against poverty, hunger and undernutrition.  
  
In July 2009, world leaders at the G8 Summit in L’Aquila pledged more than USD 20 billion for investment in sustainable agricultural development and safety nets for the world’s most vulnerable people. The Global Agriculture and Food Security Program (GAFSP), a multi-donor fund, was set up in early 2010 to funnel part of those pledges, with several donors making initial commitments totalling around USD 880 million. Investment in agriculture and rural development to boost food production and nutrition is also a priority for the World Bank Group, which works through several partnerships to improve food security. This ranges from encouraging climate-smart farming techniques and restoring degraded farmland, to developing more resilient and nutritious varieties, and improving storage and supply chains to reduce food losses.

9.6. Climate change as a specific driver of food price hikes

In its report on extreme weather, Oxfam (2012) *ibid.* warned that the full impact of climate change on future food prices is being underestimated, with this aspect largely missing from today’s climate change debate. Climate change is making extreme weather – like droughts, floods and heat waves – much more likely. Extreme weather events in a single year could bring about price spikes of comparable magnitude to two decades of long-run price rises, Oxfam concludes. As the 2012 drought in the USA shows, the most severe in over half a century, weather-related shocks, especially in major crop exporting countries, can drive prices sharply upwards in the short term. They can also trigger responses among producer and consumer countries, such as an export ban in the case of the Russian drought in 2010, which escalate prices further. Oxfam also concludes that for vulnerable people, those who live precarious lives in poverty, sudden and extreme price hikes could be more devastating than gradual long-term rises to which they may have more chance of adjusting.

The Oxfam report draws on new research, which it commissioned, that models the regional and global impact of extreme weather on the prices of key international staple crops in 2030 (Willenbockel, 2011). Studies to date have focused almost exclusively on the first impact, modelling the extent of long-run average price rises in the absence of price volatility caused by extreme weather. This tells only half the story, which is nonetheless alarming. Willenbockel suggests that the average price of staple foods such as corn could more than double in the next 20 years compared with 2010 trend prices – with up to half of the increase due to changes in average temperatures and rainfall patterns. For instance, a nationwide drought in India and extensive flooding across South East Asia could see the world market price of rice increase by 25 percent, whilst drought and flooding in southern Africa on the same scale as in 1995 could increase the consumer price of corn and other coarse grains by as much as 120 percent.

Oxfam (2012) *op. cit.* points out that the impact on prices of extreme weather events in sub-Saharan Africa is likely to be more devastating than price spikes on *global* markets. As sub-Saharan Africa will likely remain dependent on locally and regionally produced crops for food and livelihoods, international shocks (such as in Russia and USA) are likely to pose less of a threat than local events – though they could still have significant impacts. By 2030, over 95 per cent of the corn and other coarse grains consumed in sub-Saharan Africa is likely to come from the region itself (Table A7 in the 2030 modelling report by Willenbockel, 2011 *ibid.*).As a result, weather-related shocks could have a devastating impact on local production, prices and therefor levels of consumption of coarse grains. For example, the modelled climate shock in Southern Africa shows that direct consumption of corn and other coarse grains could fall by as much as 54 per cent, a massive blow to the food security of the poorest. Climate change could lead to a permanent increase in yield variability and excessive food price volatility, resulting in many poor countries having potentially insuperable food security challenges.

However, none of the outcome scenarios presented in the modelling research is inevitable, of course. Not only must ‘we’ address the causes of climate change, but also our broken food system and strengthen its resilience, especially for the poorest consumers and food producers. Developed countries must deliver on their promises of climate change adaptation finance to the poorest, and capitalize the Green Climate Fund, which if properly operationalized can channel resources to those mitigating and managing the effects of climate change. Adaptation will be needed in developed countries too, as some of the world’s main exporting regions are similarly highly vulnerable.   
  
Reversing decades of under-investment in small scale agriculture in developing countries can boost regional productivity, helping it keep pace with rising populations. Scaling up community-based disaster preparedness globally (such as community-based national and regionally coordinated food reserves, and social protection schemes) is also vital to reduce vulnerability and building people’s capacity to cope when weather shocks strike.

Yet while adaptation will help address the long-term impacts of climate change on productivity, extreme events that have the potential to wipe out harvests will be impossible to forestall, however successful we have been in developing and distributing seed of varieties which are drought- and heat-tolerant. Ultimately, however ‘climate-smart’ the farmer and the technology he/she uses, our food system cannot cope with unmitigated climate change, and addressing Doomsday scenarios such as how the ninety per cent of farmers in western China who currently lack crop insurance will survive if their wheat harvests fail (Chapter 6.9).

The 2011 yearly global average of greenhouse gas emissions was the highest up to then. As emissions continue to climb, extreme weather in the US and elsewhere provides a glimpse of our future food system in a warming world. Our planet is heading for average global warming of 2.5–5°C this century. . As an example, the ongoing drought and heat cycle in much of Queensland, Australia, is already seriously impacting the availability of beef on the export market, causing many people to cut back on meat consumption and replace it with cheaper grain derivatives, which leads to an upward pressure on global grain prices. There is no escape from the conclusion that the world needs to wake up to the drastic consequences that climate inaction can bring to food prices and the world’s food system.

1. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)