

Causes, Consequences and Policy Implications of Global Food Price Shocks: Introduction and Overview

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Abstract

Between January 2006 and April 2008 the real price of food traded on world markets rose by around 80%. The factors behind this dramatic surge are varied and, to an extent, remain contested, although fundamental shifts in patterns of demand, the effects of climate change, and the greater use of grains and oilseeds as fuel substitutes played a major role. Financial factors, including asset-price bubbles in commodity-backed securities, may also have played a role. As more recent events suggest, the era of high and volatile food prices is likely to persist which demands a better understanding of the economics and political economy of food price shocks in low-income economies. The papers in this volume, drawn from an AERC conference in May 2009, examine key issues in the origins and consequences of the recent global food price surge and seek to identify the public policy lessons for government and their international partners.

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1. Introduction

Between January 2006 and April 2008 the real price of food traded on world markets rose by an average of around

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80%.¹ For some food commodities, most notably maize and rice, the surge was even more dramatic. US yellow maize prices rose by 180% over the same period while those for Thai rice almost tripled. But the price boom was short-lived and within 6 months, food prices had fallen back by between 40 and 60% from their peak. Prices have remained volatile and since mid-2010 began rising very rapidly again. As this volume goes to press, food prices are higher than at their peak in 2008.² We are clearly in the midst of an extended period of food-price volatility and possibly also seeing a sharp reversal of a quarter-century trend decline in average world food prices. Since the commodity booms of the late 1970s, real world prices for food have fallen steadily, and by 2000 were only one-quarter of the level they reached in 1980. For the world as a whole, on the eve of the price surge in 2006, food had never been cheaper.

The factors behind the dramatic surge in prices are varied and, to an extent, remain contested. In their paper in this volume, Abbot and Borot de Battisti stress the role of shifts in global patterns of food demand—towards increased consumption of grain-fed beef in China and East Asia, for example—combined with rising fuel and fertiliser costs and high subsidies on bio-fuel production in the USA as key drivers. To these are added adverse climatic conditions which, combined with historically low levels of food stocks, have sharply reduced global food supplies. Others argue that the surge in world prices of food, along with those for most other commodities, particularly oil and minerals, was a by-product of the generalised asset-price bubble that presaged the global financial crisis. *Caballero et al. (2008)*, for example, argue that, faced with weak financial sectors at home, the high volumes of savings being generated in many emerging market countries were channelled into more developed financial markets and, increasingly, into a range of asset back securities including commodity-backed instruments, driving their prices higher.

Some of these factors are clearly transitory, but others suggest that rather than being a one-off shock, the price spike of 2006–2008 boom may signify a new era of significantly elevated global food price. Food price volatility is likely to persist for some time to come, certainly until supply adjusts to patterns of demand and adaptation technologies become entrenched.

¹ Source: IMF Food Index consisting of: cereals, vegetable oils, protein meals, meats, seafood, sugar, bananas and oranges (IMF Commodity Price Index).

² *Ibid.*

Whatever their cause, the food price surge 2006–2008 has seen a range of long-term public policy concerns return to centre stage. At the international level, questions of food security, food aid and the feasibility of extending various insurance schemes to farmers in low-income countries have reappeared in the policy discourse. At the same time, the World Bank, IMF and FAO, as well as many bilateral agencies, have scaled up their surveillance activities and have been dispensing policy advice to developing countries whose food security and macroeconomic stability came under threat from surging world food prices. At a domestic level the price shock re-ignited debates on the role of strategic food stock management, on trade protectionism in the food sector (most notably, export bans on food were re-introduced in a number of countries) and on the capacity of social safety nets to protect the vulnerable. The shock also saw renewed debate on the appropriate configuration of monetary and fiscal policies.

In order to deepen our understanding, draw lessons and propose options for mitigating impact of global food price shocks in Africa, the African Economic Research Consortium (AERC) hosted a 1-day Plenary Session in May 2009 on *The Causes, Consequences and Policy Implications of Global Food Price Shocks*. The papers in this volume address the following topical issues, namely, causes and consequences of food price shocks; macroeconomic management of food price shock in low-income countries; managing food security implications of food price shocks and, political economy of global food price shocks in Africa.

2. Recent global food price shocks: causes, consequences and lessons for African governments and donors

The first paper by Phillip Abbott and Adeline Borot de Battisti address the question of causes and consequences of the 2006–2008 global food price shock and draws lessons for African governments and their development partners. On causes, Abbott and Borot de Battisti note that although there is some controversy in the literature about the causes of rising food prices, there is consensus that supply and utilisation events, such as competition for grains and oilseeds as food versus fuel, are major determinants of rising food prices. They also note that financial factors such as movements in bilateral exchange rates that exaggerated prices measured in dollars, speculation and the infusion of money by institutional investors and hedge funds into commodity markets also played a role. Because

interactions among these factors matter for the resulting outcomes, it is difficult to assign contributions of each of them to the global food price shock.

On the consequences of higher commodity prices, the authors rightly point out that these vary widely reflecting import dependence, the availability of domestic substitutes and the efficiency of policy responses. Although market integration is generally poor in developing countries, rising food and input costs are transmitted to the local economy and have hurt consumers, governments and some farmers. Countries linked to world markets experienced higher grain prices and food inflation and were consequently more severely impacted. Although African domestic grain prices did not fully reflect world price changes, but as a whole, African economies experienced remarkable and persistent increase and food inflation. As a result, rising food prices significantly erode income of the net food buyers and have pushed millions of people into hunger and poverty. The World Bank has just confirmed that the rising food prices since June 2010 have pushed about 44 million people into extreme poverty in low- and middle-income countries ([World Bank, 2011](#)). Abbott and Borot de Battisti also note that the degree of transmission of international prices also influenced input prices. Many developing countries are net importers of fertiliser and crude oil; unless these costs can be fully passed on to consumers, rising input prices blunt farmers' incentives to produce even if output prices were rising. As a result, policy measures, (e.g. input subsidies) aimed at mitigating the transmission of higher input prices to domestic markets were weaker than anticipated.

On lessons for African countries and their development partners, the authors stress the challenge facing governments of recognising that the era of cheap food has passed and that under-investment in agriculture must be reversed. African leaders must recognise that the state has a role to play and that national policies should be committed and time consistent. The political institutions should also realise the benefits of improving agricultural and economic science. The government should provide certain public goods and foster institutional changes. In addition, there is need for coherence between national governments and donors for aid effectiveness, and partnerships that have emerged to address this crisis need to more effectively engage national governments. Considering transition to a future of higher food prices, Abbott and Borot de Battisti suggest that efforts should be made to reconnect short-run isolationist policies to protect consumers and long run policies to develop agriculture. Improved efficiency of policy actions requires enhanced coherence

between beneficiary governments' and donors' priorities as well as increased integration and cooperation with regional activities.

3. On the macroeconomic management of food price shocks in low-income countries

In the second paper, Christopher Adam takes a closer look at the challenges of managing the macroeconomic consequences of food price shock. He noted that food and fuel price shocks are disproportionately important for the low-income countries of Africa, partly because food and fuel constitute an enormous share of households' consumption baskets, and are necessities with few substitutes. On the demand side, the income elasticity of food consumption is low and there is limited elasticity of substitution between staple and non-staple foods. This is mirrored on the supply side by a low elasticity of supply in staple food production and a limited elasticity of substitution into non-traditional domestic food production. Consequently, he argues, price shocks can have powerful income effects which will be transmitted to the non-food economy. This is borne out by evidence: Adam notes evidence from the IMF suggesting the cumulative balance of payments shock associated with rising food and fuel prices from early 2007 to mid-2008 to be equivalent to around 4% of pre-shock GDP for non-oil producing countries in Africa and was much higher for conflict or post-conflict countries such as DRC and Liberia, where the shock was as much as 8% of GDP. In addition, rising global food and fuel prices drove inflation sharply upwards, with median inflation rising from around 6.7% in 2007 to over 10% per annum in 2008.

Simulation analysis is used to demonstrate how the macroeconomic impact of the global food shock depends on the context, economic structure and pre-shock conditions of the specific countries. The less flexible the domestic economy is, the larger the real exchange rate adjustment and hence the larger the real wage adjustment required for inducing the necessary resource movement to respond to rising food prices. For low-income countries (Africa), flexibility is likely to be limited, both on consumption and production sides. He also notes that distributional effects can be potentially important as they go a long way in determining the political feasibility of alternative policy responses, including otherwise 'revenue neutral' responses. Tariff reduction and consumption transfer have different implications for resource allocation with the former neutralising the initial relative price movement and help avoid the pass through of

higher food prices, whereas the latter assists in cushioning the income effect of rising prices on recipient household. Finally, Adam notes that while external financing can ease the adjustment costs to a country, the balance between 'adjustment' and 'financing' depends on the expected duration of the terms of trade shock, the intensity of the shock as well as its magnitude.

In contrast to terms of trade shocks that hit export crops and minerals, Adam is of the view that macroeconomic management of food price shocks cannot proceed without careful attention being paid to the distributional effects of large price movements and thus to the potentially first-order fiscal costs of policy measures put in place to address these effects. Moreover, the prevalence and increased frequency of supply-side shocks, such as global food and fuel price shocks, has seen the enthusiasm for inflation targeting that was widespread in the early 2000s being replaced by a more sober assessment of how such regime might best be modified for the conditions of Africa. Finally, the author stresses the complementarity of structural and regulatory policies directed at improving the functioning of markets for food and the conduct of monetary and fiscal policies.

In summary, the author observes that the spike in global food and fuel prices between 2006 and 2008 and the dislocation of trade that followed the global financial crisis brought a long period of relatively benign macroeconomic conditions to an abrupt halt, forcing authorities around the world to re-assess the reach and limits of macroeconomic management. To avoid distributional effects of large price movements, the author advocates that structural and regulatory policies that reduce the prevalence and frequency of supply-side shocks should be put in place in Africa.

4. Managing food security implications of food price shocks in Africa

A major implication of food price shocks is on food security and hunger. Accordingly, the third paper by Chris Ackello-Ogutu presents an overview of how African countries have responded to the food price crisis and lays out broad outlines for what should be done so that African agricultural sector can be provided with the right investments and incentives to produce sufficient food and lay the basis for broad-based economic growth. He, like the other authors in this volume, identifies the same set of causes of the price shocks, namely, supply and demand side factors as

well as external factors. Thereafter, Ackello-Ogutu discusses impact of rising food prices on food security. Clearly the most immediate concern is on consumers, especially poor consumers for whom food account for a large share of their expenditure and for whom price increases severely reduce their wellbeing. But the same price increases offer the prospect of an income gain to African farmers. However, Ackello-Ogutu cautions that the actual benefits depend on market structure, magnitude of commodity price increase relative to increase in input costs and the net trade situation of the farmers as well as government protectionist and isolationist policies which often distort price transmission. Thus, to ensure that high prices can help reduce poverty among farmers and farm workers in the long term, governments must focus their attention on investment in infrastructure, including roads and marketing institutions.

On actions taken so far by countries in Sub-Saharan African (SSA) to increase food supplies and trade, the author observes that the core aim of policy in case of emergencies arising from food price shocks has been to minimise welfare losses. Targeted cash transfers are common ways to implement these emergency programmes. Leveraging resources in advance will ensure that emergency response does not entail diverting resources from investments needed for long-term agricultural development. Over the long term, the opportunity presented by the rising prices must be exploited by putting in place conditions that will create a viable and equitable food supply system within countries and globally. This will require, among others, increasing agricultural productivity and making advances in science and technology relevant to African agriculture including plant breeding; application of biotechnology; application of information technology tools and human capacity building in science.

5. Political economy of recent global food price shocks

Food price shocks tend to have a fuzzy and heterogeneous effect on developing countries. Since, not all developing countries are net food importers, an increase in prices could present an opportunity to stimulate agricultural production for some countries and a burden for others. In each of these cases, the effects on households, public finances, current accounts and agricultural production could be fundamentally different. Accordingly, Bernadette Dia Kamgnia, in the fourth paper, uses a political economy analysis to unravel the impact of global food price shocks on developing countries. In doing so, she analyses the heterogeneous effects of food

price shocks on developing countries in general, and among SSA countries in particular using annual panel data of 88 developing countries for the period 1995–2006. This way, Kamgnia is able to identify the heterogeneities in the macroeconomic effects of food price shocks.

A vulnerability index, developed by the author, is used to classify countries into three categories, namely: weak vulnerability, average vulnerability and high vulnerability. In the study sample of 88 countries, 22 and 44 were found to be weakly and averagely vulnerable, respectively, while 22 were highly vulnerable. Overall only two African countries were weakly vulnerable, while 14 fell in the most vulnerable category. Among these most vulnerable countries, Madagascar, Malawi, Rwanda, Togo, Chad and Tanzania were at the extreme level of vulnerability.

On the impact of food price shocks on the undernourished, the author finds that an increase in food prices reduces the percentage of the undernourished in less vulnerable countries and has positive income effects for their populations since they are net food exporters. Furthermore, the improved level of development and an increase in food availability reduces the percentage of the undernourished. On the other hand, high population growth rates, high inflation rates and climatic shocks result in an aggravation of malnutrition. On the impact of food price shocks on public spending, the author finds that governments in highly vulnerable countries generally react to the increase in food prices by implementing strategies that increase public spending. These strategies can range from direct monetary transfers to import subsidies. Nonetheless, in moderately vulnerable countries, food price surges do not lead to an increase in public spending. With respect to the contribution of food price shocks to the current account balances, Kamgnia found that most vulnerable countries incur notable deteriorations in their current account balances since this implies an increase in their import bills. However, moderately vulnerable countries experience current account surpluses instead.

Turning to the effects of food price shocks on food production, the author finds that, as expected, only the net food exporting countries are sufficiently motivated by the global food price surge to increase their local food production and hence increase agricultural income. However, in these countries, climatic shocks and the variability in food prices have negative impact on local food production. In addition, the author suggests that vulnerable oil exporting countries tended to cope much better with the global food price shocks than vulnerable oil importing countries while the impacts of global food price shocks tend to be more severe in conflict and post-conflict countries accentuating their vulnerability.

In conclusion, African governments, and those that seek to advise them, the IMF and World Bank, need to develop a better understanding of the dynamics of global food prices so as to design better policy interventions when price shocks of this kind recur. The essential question is only partly one of forecasting price shocks. Rather it involves understanding the persistence of shocks: this determines the extent to which public policy should be geared towards ‘financing’ the shock as opposed to ‘adjusting’ to it.

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