



# AfDB

Chief Economist Complex

## Africa Economic Brief

Volume 2 • Issue 2  
April 2011

### KEY POINTS

- The rising food prices and increasing frequency and magnitude of their volatility have worsened the food security situation for Africa's poor population.
- Facilitating trade and especially intra-regional food trade would help ensure food security and mitigate supply-side shocks. A conclusion of the Doha Development Round of trade negotiations is key for opening up global markets to African countries.
- In Africa, the food insecurity is exacerbated by a disproportionate damage from the climate change and in parts of Southern Africa also by high rates of HIV/AIDS. Policies need to account for these country- and region-specific circumstances.
- An adequate rural infrastructure is crucial to raise competitiveness and productivity of local agricultural producers and to allow for an efficient food distribution.
- To make its support effective, the Bank has realigned its agriculture portfolio to selected areas of intervention in its Medium Term Strategy.

**Mthuli Ncube**  
m.ncube@afdb.org  
+216 7110 2062

**Charles Leyeka Lufumpa**  
c.lufumpa@afdb.org  
+216 7110 2175

**Désiré Vencatachellum**  
d.vencatachellum@afdb.org  
+216 7110 2076

## TOWARDS FOOD SECURITY IN AFRICA: Challenges, Policies, and the Role of the African Development Bank

Adeleke Salami, Zuzana Brixiova, Hesham Kandil and Albert Mafusire<sup>1</sup>

### I – Background

The world today has sufficient global food supplies, yet 925 million people were undernourished in 2010; of this 239 million were in sub-Saharan Africa (SSA). Moreover, the number of undernourished people in developing countries, including in Africa, has steadily risen since the mid-1990s. Large inequities in the distribution of land and income across and within countries, especially in Africa's low income countries, contributed to these trends. Due to conflicts, natural disasters, crop failures, and other factors, thirty countries globally, and twenty in Africa, needed external assistance with food supply in 2010.

In Africa, where more than 1/3 of people live on less than \$1 per day, food security is linked to poverty and food prices. This brief thus first provides an update on the food situation in

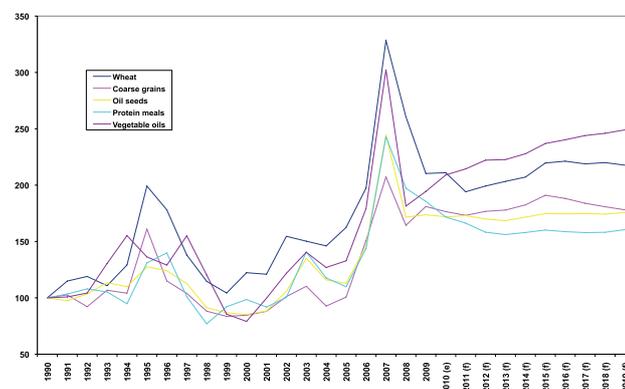
Africa as well as global trends in food prices. It then addresses the policy actions that African policymakers can take to improve their regional, national and local situations.

### II – Short-term Shocks and Mitigating Policies

#### Market Overview

Food prices have been rising since mid-2010, driven by increases in energy prices, bad weather and natural disasters, among other factors. By early 2011, the FAO food price index exceeded its peak during the mid-2008 food crisis. The price of wheat rose by 90 percent between June 2010 and March 2011, while that of rice climbed by 33 percent during the same period. Food prices are projected to stay high over the medium and longer term (Figure 1). Rising global food prices have been accompanied by increased volatility (Table 1).

Figure 1: Food prices, 1999- 2019 (actual and projections, indices, 1990 = 100)



Source: Authors' calculations based on the OECD – FAO Agricultural Outlook database.

<sup>1</sup> Comments and inputs were received from Touba Bedingar, Aly Abou-Sabaa, Désiré Vencatachellum, and Peter Walkenhorst.

The short term global food price increases are caused mostly by supply shocks such as conflicts, natural disasters, oil price increases, and exchange rate fluctuations. Recently, commodity investments by financial institutions and hedge funds have also played a role. For example, in mid-2010 the Armajalo's investment fund bought all cocoa supplies on the market, causing the highest surge in the cocoa's price in 33 years.

The rising demand -- due to population growth, higher incomes, changing tastes, demand for bio-fuels -- has driven the upward trend in food prices in the longer run. In Africa, the impact of these factors has been exacerbated by low agricultural productivity, severe distortions in agricultural markets, vast infrastructure gap, higher incidence of conflict, and a disproportionate damage from climate change. Higher global prices could stimulate agricultural production, but price transmission mechanisms in Africa operate with a lag and are impeded by market imperfections.

### Regional Variations

The impact of higher and more volatile food prices has varied across Africa. While low-

income food-deficit countries (e.g. Burundi, Eritrea) are particularly vulnerable, emerging markets with high shares of food in their expenditures (e.g. Egypt) can be heavily affected as well. Due to droughts, cereal production declined sharply in 2010, exacerbating global factors in North Africa, where the consumption of grains per capita is among the highest in the world. Even though consumers in the region are protected by price subsidies for basic staples, the burden of the food import bill on the budget has been rising.

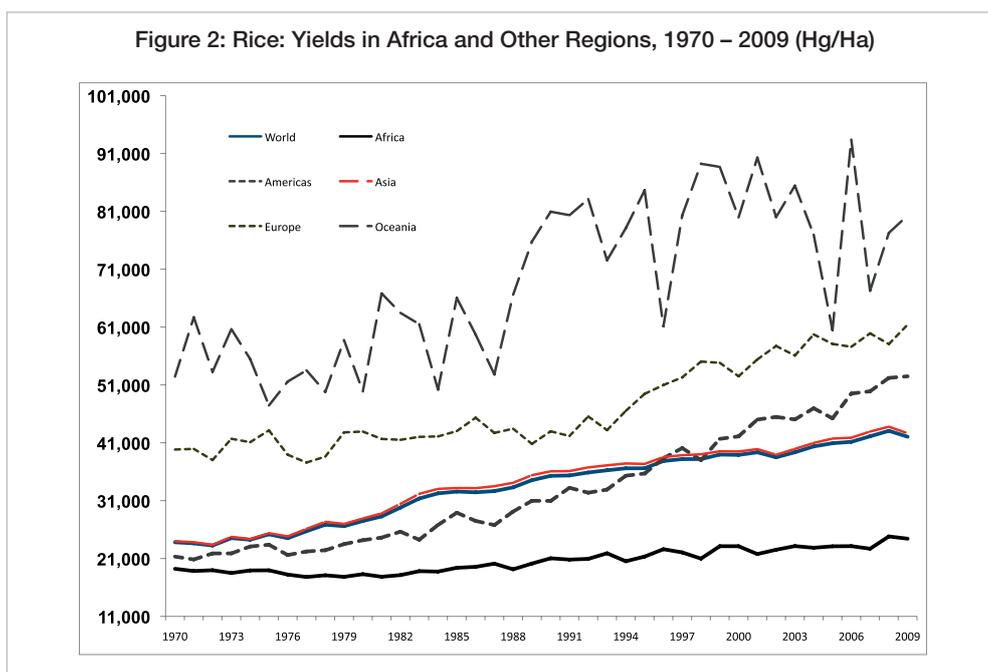
In North Africa, measures to mitigate the rising prices included: suspension of import tariffs on sugar and cooking oil in Algeria; further increases in subsidies for food in Egypt (which already amounted to 1.3 percent of GDP in 2007); removal of custom duties and new compensation schemes for wheat imports in Morocco; and lowering wheat import tariffs in Tunisia, among others. At 10 million tons of wheat, Egypt is projected to be the world's largest wheat importer in the 2010 – 2011 season. Despite these measures, rising food prices have been viewed as one of the contributing factors behind the major social and political unrests in some countries in North Africa in 2011. Recently, the crisis at

the Libya border has caused concerns regarding food security in Libya and surrounding crisis-affected areas.

### Policies to mitigate short term price increases and volatility

The trend to invest in commodities is expected to continue, given the investors' need for portfolio diversification. Policies to prevent 'speculative commodity bubbles' include, for example, taxing funds withdrawn from commodity investments in less than a year and other regulations of commodity markets. Central Banks and Ministries of Finance can help ensure that private sector credit and investment options are not crowded out with public borrowing.

More broadly, policies against food security risks due to price volatility need to go beyond the food and commodity markets. Food price volatility can be managed with regulating the global food trade, since shortfalls in individual countries can be offset through trade. It is thus important to limit the use of export and import restrictions. Concluding the Doha round of trade negotiations is key in this regard.



Source: FAO database.

**Table 1: Volatility of Food Prices (relative coefficient of variation, %), 1991 – 2011 /**

	1991-95	1996-2000	2001-05	Av. 1991 - 05	2005-11
Rice	22.1	18.2	20.2	20.2	34.9
Soybeans	8.6	20.3	21.8	16.9	26.7
Wheat	...	8.4	12.0	10.2	27.2

Source: Authors' calculations based on the FAO database. 1/ March 2011.

The public could be better informed about short-term food production, consumption, and stocks, as well as about medium-term market prospects. Farmers would benefit from effective incentives to invest in the agricultural sector. Finally, well-targeted social safety net measures (e.g., cash transfers, food distribution) can go a long way in protecting the most vulnerable.

In 2007 – 08, the global grain reserves fell to the minimal feasible levels due to high income growth and bio-fuel mandates (Wright, 2010). With the prices of food reaching exceptionally high levels in 2008, policymakers have been again contemplating holding strategic grain reserves. The debate is ongoing, but a consensus has emerged on usefulness of regional food security policies to address some of the market distortions and support food production.

### III – Challenges to Africa's Food Security over the Longer Horizon

Despite favorable weather conditions for cereal production in most Africa's sub-regions, real growth in the agricultural sector has averaged at about 2-2.5 percent a year since the late 1970s – to the same

rate or below the population growth. Agricultural productivity thus remains far below world average (Figure 2). Clearly, raising agricultural productivity including that of smallholder farmers is a key component in reducing poverty and hunger in Africa.

#### Raising Agricultural Productivity through GM Methods

The recent gene revolution -- adoption of bio-technology in agricultural production-- driven largely by private companies from industrialized countries brings a lot of opportunities and challenges for African farmers. According to a FAO report, the world's top ten transnational bioscience corporations' collective annual expenditures on agricultural biotechnology R&D amounts to nearly US\$3 billion. This is ten times the expenditures of the Consultative Group on International Agriculture Research (CGIAR), the largest international public-sector supplier of agricultural technologies focusing on the needs of developing countries.

Agricultural biotechnology gives farmers numerous opportunities to raise their productivity through, for example, improved and disease-free planting material; pests/diseases resistant crops; and use of

less harmful environment. However, there are concerns about affordability, adaptation, and relevance for local needs (especially for smallholder farmers) of the recent agricultural innovation through genetically modified crops.

#### Climate Change

Africa is the region most vulnerable to the impacts of the climate change. Preliminary estimates for the period up to 2080 suggest that agricultural productivity could decline by 15- 30 percent on average and by 50 percent in the most climate change – exposed countries. Occurrence of humanitarian and food crises is likely to rise due to more frequent extreme weather events. Poor farmers will be most vulnerable to negative implication of these developments. In some parts of Southern Africa, these challenges have been amplified by the high prevalence of HIV/AIDS (Box 1).

#### Longer Term Policy Priorities

In the long term, enhancing agricultural productivity together with mitigating and adapting to climate changes should be the primary focus of food security initiatives aiming. In that context, actions in the following areas are critical:

<sup>2</sup> According to Knoepfel (2011), the amount of funds of institutional investors (e.g., pension funds) invested in commodities rose from \$6 billion during 1990s to the current \$320 billion.

- Removing barriers to trade, and especially intra-regional food trade. Volatility of food prices can be managed with policies regulating the global food trade, since shortfalls in individual countries can be offset through trade.
- Developing an adequate rural infrastructure (roads, storage facilities, access to markets, handling and conservation systems, and supply networks) to improve competitiveness of local producers and to allow fast and efficient food distribution.
- Developing a supportive financial infrastructure to facilitate farmers' access to credit, risk hedging for commodities,

and weather insurance instruments. Use modern technology to improve access of farmers to credit (e.g. mobile banking).

- Providing stable and predictable support to long-term agricultural research as well as the development of human resource capacity.
- Improving land property rights and access to land will boost farmers' economic incentive to utilize land efficiently. Also, investments in land improvement and sustainable water resource management remain key.
- Introducing incentives for private investment to increase productivity (labor, yields), e.g. through public credit guarantees, grants.

### Box 1. The Changing Nature of Food Insecurity: The Case of Swaziland

Swaziland is a small, land-locked country in Southern Africa sub-region. It has been experiencing recurring droughts since the early 2000s. While during the 1990-92 about 14 percent of Swazis were undernourished, the share has climbed to 22 percent by 2002-04. Similarly, according to the Global Hunger Index (GHI), the food insecurity in Swaziland has increased markedly over the years. In 2008 Swaziland was considered to be the third worst performer in the world (after North Korea and the Congo Democratic Republic) w.r.t. percentage change in GHI (e.g. increase in the share of people requiring food aid) since 1990. This regress is in stark contrast to some other countries in Africa (e.g., Ethiopia, Ghana, Mozambique) that improved their GHI during that period.

About 80 percent of Swazis are in smallholder agriculture. While almost 90 percent of state-owned land used for growing maize, the yields have been falling during the past decade. In 2008, the domestic food deficit left almost 300,000 people in need of food aid. The annual harvest in 2010 amounted to 76,068 tons, leaving about 30,000 cereal gap until April 2011 harvest. According to the World Food Program projections, Swaziland will continue to require food aid in the coming years.

The food insecurity has been made more acute by Swaziland's one of the highest rates of HIV/AIDS rates in the world. According to the 'New Variant Famine' (NVF) hypothesis the HIV/AIDS prevalence endangers food security by exacerbating other factors (social, economic and political) that lead to food insecurity. In turn, the food insecurity and HIV/AIDS contribute to poor social indicators in some key areas – in 2010 the life expectancy was only 47 years, the third lowest in the world.

The indicators of the NVF are: (i) household level labor shortages due to high mortality and increased number of dependents; (ii) loss of assets and skills due to adult mortality; (iii) increased need to care for people affected by the HIV/AIDS and (iv) the vicious cycle between food insecurity and aids. When assessed according to these indicators, Swaziland has indeed been experiencing NVF in recent years. In particular, fewer working adults have lowered food security by cutting on food production.

For a large number of adult women, increased food insecurity has led to high-risk sexual behavior that has contributed to high rates of HIV/AIDS and in turn greater insecurity. The challenges have been magnified by weakened government capacity for service delivery, which in itself again is one the impacts of HIV/AIDS. However, while evidence was found for NVF in Swaziland (and Malawi), it does not automatically imply its existence in the rest of Southern Africa; further research is needed.

Some of the actions against the 'triple threat' in Swaziland – weak government capacity for service delivery; HIV/AIDS and food insecurity --- include support to income generating activities for HIV/AIDS affected households in rural areas; and improving data collection and access to HIV/AIDS information and education. Multilateral organizations involved in addressing the food insecurity stemming from HIV/AIDS could (i) support research to gain better understanding of the threats that HIV/AIDS poses to food security directly as covered above and indirectly through impeding the climate change adaptation; (ii) improve distribution of antiretroviral drugs; and (iii) provide incentives to close the human resource gaps in key areas (social scientists, climate change analysts, engineers).

Sources: Naysmith et al (2009) and Drimmie and Gillespie (2010).

### IV – Bank's Support to Agriculture and Food Security (2008-2010)

The African Development Bank has an important role to play in supporting its regional member countries (RMCs) in their efforts to achieve food security. To make its support effective, the Bank has realigned its agriculture portfolio to select areas of intervention in its Medium Term Strategy. The agriculture strategy for 2010-2014 aims to foster greater agricultural productivity, food security and poverty reduction.

During 2008-10, the Bank extended about \$700 million in agriculture-focused loans to 24 RMCs. In particular, the Bank approved the Africa Food Crisis Response in July 2008, which was implemented over one year and provided agricultural inputs and materials worth USD 360 million. This initiative has benefited approximately 2.3 million people in 28 RMCs.

### REFERENCES

- Drimmie, S. and Gillespie, S. (2010), *Adaptation to Climate Change in Southern Africa: Factoring in AIDS*, Environmental Science and Policy, Vol. 13, 778-784.
- Naysmith, S.; Waal, A. and Whiteside, W. (2009), *Revisiting New Variant Famine: The Case of Swaziland*, Food Policy, Vol, 251-260.
- Wright, B. (2010), 'Grain Reserves and Food Security in MENA Countries', paper presented at the UC Berkeley Conference on Agriculture for Development - Revisited (October 1- 2).