REGIONAL TRADE AND FOOD SECURITY: FOOD CRISES IN 2005 AND 2010[1]

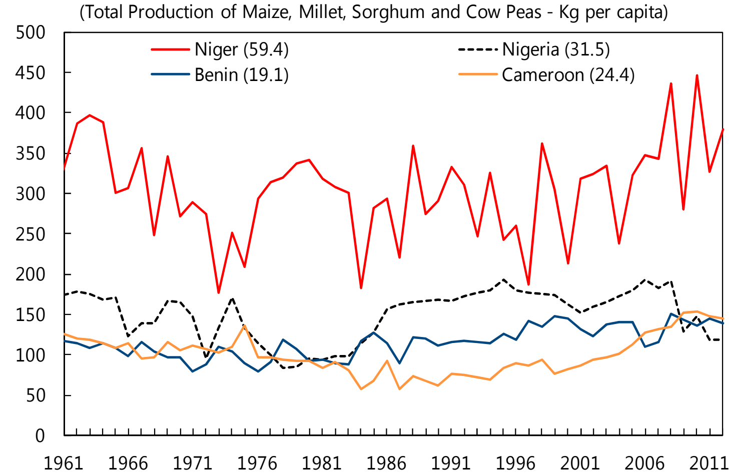
Niger has diversified its sources of cereal supply, but Nigeria remains its major supplier. Trade flows are facilitated by proximities and shared values by a network of traders. Other factors such as depreciation of the naira against the CFA franc and evolving regional integration are contributing to increased trade flows. As Niger depends more on Nigeria and other neighbors to manage its grains deficits and stabilize domestic prices, a regional regulation mechanism would help to ensure the stability of food price across the region.

A. Background

1. **Cross-border trade of grains between Nigeria and Niger impacts food security**. Niger experiences a high variability of grains production, leading oftentimes to food crisis, significant price increases, food access problems, and consumption shortfalls (Figure 1). Regional trade has often acted as a cushion to grains deficits. For instance, the 2005 and 2010 experiences showed the role that markets and cross border trade can play in dampening food insecurity. Food production deficit was relatively low in 2005, but inadequate functioning of markets aggravated the impact of the crisis. In contrast, in 2010, improved functioning of regional trade increased availability of food and limited significantly the adverse effects of the crisis.

Figure 1. Niger: Selected Economies: Cereal Production Volatility

(Total Production of Maize, Millet, Sorghum and Cow Peas - Kg per capita)



Source: FAOStats, 2013
In parenthesis standard deviation

2. **Against this background, the note examines the following issues related to regional trade and food security, in order to better highlight the challenges ahead**: (i) the volume and determinants of regional grains trade; (ii) the cross-border trade and its impact on food security; and (iii) the challenges to cross-border trade.

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B. Volume and Determinants of Trade

3. **Niger's geographical situation and similarities with neighbors favored regional trade with them, in particular Nigeria**. Niger shares a long border (over 1,500 km) with Nigeria, as well as complementary agro-pastoral activities. Shared culture, language, and social and religious values of the Hausa people on both sides of the border favored the formation of networks of traders. These networks allow intensive trade surrounding the cities of Maradi in Niger, Katsina and Kano in Nigeria (the "K^2M axis"). Traded products are livestock, cowpeas (niebe), peppers and tigernuts (souchet) from Niger, grains and manufactured goods from Nigeria, and other products re-exported (from Benin/Togo) to Nigeria.

4. **This cross-border trade plays an important role in Niger's food security**. Trade has benefited to Niger food security, and also to neighbors. For instance, trade allows Nigeria and Niger to make the most of their respective competitive advantages. Niger exploits its advantageous position in livestock production and trade, almost entirely (97 percent) exported to Nigeria, while Nigeria supplies almost 60 percent of Niger's grains deficits. In terms of absolute value, some estimates talk of around 200,000 tons of Nigerian millet and maize having been sold in Niger each year during the 1990s, underlining the importance of Nigerien imports. The Niger's agricultural market information system for the years xxx shows that maize represent between 40 and 55 percent of the country's dryland cereal imports, while millet comprises between 30 and 40 percent of such imports.

5. **Many factors have shaped regional food flows**. Production's fluctuated greatly from one year to the next due to rainfall variability, locust attacks, and the provision of seeds and fertilizers. Governmental policies such as opening or closing of borders to imports or exports, different fiscal policy, and levels of public grains purchases can vary from country to country, leading to high levels of fluctuation for the whole grain availability and access. Also, changes in the three main currencies' (naira, CFAF, cedi) exchange rates could also affect the cross-border trade. International food aid flows and conflicts situations affect regional availability of food and trade flows. The creation of favoured trade areas such as ECOWAS and WAEMU supported also the development of regional trade, through the harmonization of tariffs and fiscal policies.

6. **Other factors still hinder full development of regional trade flows**. Complicated rules and regulations impede the movements of goods and services. While large traders are not sensitive to these practices, small traders' activities seem to be obstructed by these rules. Also, gradually, the language barrier reigns over socio-cultural affinities. Although the naira has been stable over the last years, traders from Niger continue to have reservations to this currency. And, the absence of instruments to hedge against the exchange rate risk surely limits the volume of transactions between the two countries. But most importantly, rising insecurity is becoming a barrier to trade as most of the Nigerien cereal traders prefer Nigerians to come and transact business in Niger.

C. The Events of the 2005 and 2010 Food Crises

The 2005 Crises

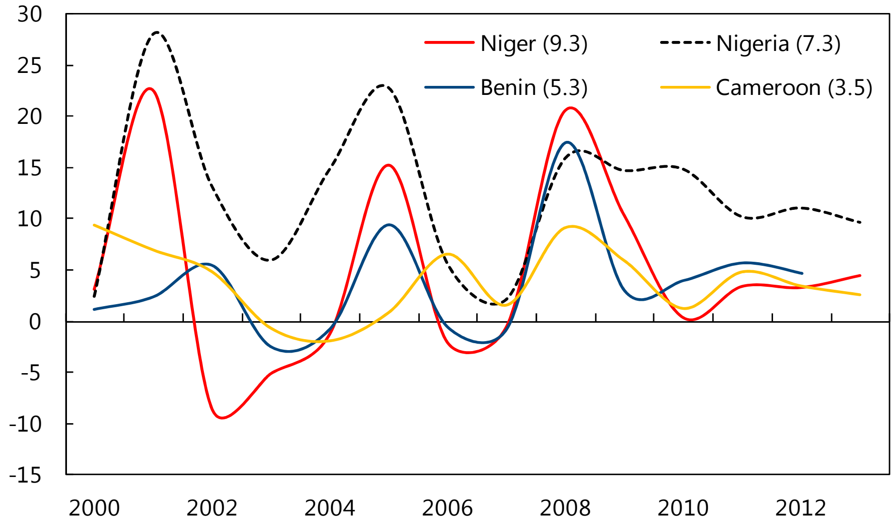
7. **The drop of production was limited, but prices increased significantly**. The 2005 food crisis in Niger has been due to locust invasion and drought. Production shortfalls were not particularly alarming compared to other years: production at end-2004 was only 7.5 percent below the national food requirement. However, there was an extremely large price hike for millet and other grains. Price surged in July 2005 for millet, with an average between 25000 and 30000 FCFA per 100kg sack, against a normal level of 15000 CFAF. Although the level of the prices were judged reasonable compared to their development during for instance the 2000-2001 agricultural season, their jump was particularly sharp in July.

8. **The price increase was the result of insufficient supply in relation to demand**. Cereal supply from effects of shortages is usually satisfied in Niger through imports from Nigeria, Burkina Faso and Mali for millet, and from Nigeria, Benin and Ghana for maize. In 2005, however, imports could not offset production deficits because: (i) high prices levels in Nigeria were the same in Niger due to increased integration of regional markets, therefore there was no incentives to trade in direction of Niger; (ii) disruption of domestic markets by uncoordinated government intervention as anticipating bidders to government grains' auctions bought most of their stocks from the Niger markets; (iii) a drop of agricultural production in neighboring countries (Cameroon, Nigeria, Chad); (iv) formal and informal obstructions to cross border commodity flows, in particular from the Nigeria side and later from the Niger side; and (v) structural changes in demand due to the increase in urban population in Nigeria.

9. **Nigeria became a net importer, but the early warning system did not detect it earlier**. Niger's early warning system did not also detect the direction and volume of grain flows from Niger to Nigeria, neither the widespread grain shortfall in the sub-region which contributed to tight supply and a sudden price rise on the market (Figure 3). Subsequently, the collapse of the terms of trade between cash crops (for instance onions exported by Niger to Nigeria) and grains on the one hand, between livestock and grains on the other hand (Figure 4), exacerbated poverty in Niger. Finally, as the food crisis was only lately detected, it was aggravated by the tardy and insufficient mobilization of Niger's partners.

Figure 2. Niger: Selected Economies: Food Inflation. 2000-13

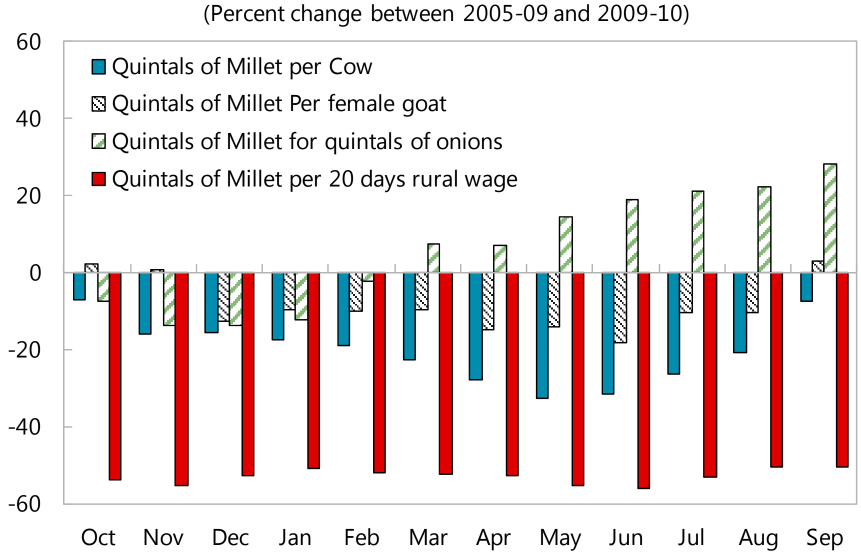
(Percent Change)



Source: AFR database.
In parenthesis standard deviation.

Figure 3. Niger: Changes in the Terms of Trade Between Millet, Livestock, Onions and Rural Wages, 2005-09 and 2009-10

(Percent change between 2005-09 and 2009-10)



Note: the terms of trade are expressed as the number of 100 kg sacks of millet obtainable by selling one female goat, 100kg of onions, or 20 days of agricultural work. For the latter, FEWS NET reports a constant daily wage of CFA Francs 500 and 1000 for 2009–10 and 2008–9.
Source: Cornia *et al (2012)*, based on data by FEWS NET.

The 2010 Crisis

10. **The 2010 grains deficit was almost the same as that of 2005, but timely response of markets altered the impact of grains deficits**. The 2010 crisis was due to production shortfall in the 2009 harvest estimated at around 400,000 tons of grain, almost the same level as the 2005 deficit level. But, its impact was very limited compared to the 2005 crisis because grain imported from Nigeria (and to some extent from Benin) acted very effectively to stabilize prices. The Early Warning System (EWS) detected quickly the 2010 crisis because the government developed in 2007 a national contingency plan for food security and nutrition which included more comprehensive parameters providing information not only on cereal output an prices, but also on imports, the nutritional status of the population.

11. **Swift action of the government helps to avert impact of the crisis**. Availability of grains in neighboring countries, particularly Nigeria, and swift action of the government and its partners helped to avert impact of the 2010 food crisis. In early February 2010, an assessment of markets and food security conducted jointly by CILSS, WFP and FEWS NET showed that 80% to 100 percent of markets in Niger were supplied each week with close to 4,300 tons of dry grain from Nigeria, 1,750 tons from Benin and 240 tons from Burkina Faso. Nigeria was thus the major grain supplier to Niger, as seen in the map above. The World Food Program (WFP) was able to purchase large quantities of grain regionally, from government grain offices (60 percent) and from major traders (40 percent). These supplies were used to benefit the poorest people in the population, through the "work for money" scheme and direct distribution.

12. **Price differential between Niger and Nigeria was positive**. According to a WFP study, the price differential for dry grains (millet, maize, sorghum) between markets in Niger and markets across the border remained positive, creating incentives to export these products to Niger. The cross-border grain trade continued in favor of Niger until July-August of 2010, and prices remained stable.

13. **The 2005 and 2010 food crises emphasize the extent to which the fate of the poorest segments of the population in Niger is closely linked to the health of the Nigerian economy**. This case illustrates Nigeria's economic responsibility in the sub-region and the importance of regional-scale crisis management in the Sahel.

Challenges Ahead

14. **Improving regional market monitoring systems**. Establish a strong regional market monitoring system is the key that will work together with national market information systems. The regional market monitoring system will encompass prices and flows for both agricultural and livestock products. To do this, an agreed in-depth regional understanding of market behavior is necessary, as well as support for database and cartography development.

15. **Better understanding of the interaction between households and markets**. Characterizing these relationships would assist in identifying when price changes could leverage food access. Niger could leverage here on the work done in the case of Mauritania.

16. **Institute a regional regulation mechanism of markets and prices of grains**. Niger depends more on Nigeria and the region to manage its deficits and stabilize domestic prices. However, an efficient regulation of grains markets requires a regional mechanism that would help to ensure the stability of food price across the region.