



FOOD SECURITY AND AGRICULTURAL SUBSECTORS IN WEST AFRICA FUTURE PROSPECTS AND KEY ISSUES FOUR YEARS AFTER THE DEVALUATION OF THE CFA FRANC

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November 1998

CONSUMPTION

Background

Policymakers and policy researchers harbored hopes and fears regarding the potential consumption effects of the CFA franc devaluation in 1994:

- (1) They hoped that the ensuing increase in the prices of imported food would drive down food imports -- involving rice, wheat, and other items such as canned milk and vegetable oil.
- (2) They hoped that the reduced relative prices of local products would increase consumption of maize from favorable agroclimatic zones, vegetables and domestic rice from the Sahel's limited irrigated perimeters, millet/sorghum from less favorable zones, pulse oils and fresh milk.
- (3) Yet many feared that: (a) the poor might be hurt by the ensuing food price inflation, especially by driving down already-low lipid, protein, and vitamin A intake; and (b) consumers might find it difficult to shift out of rice (the major convenience food for the urban workforce); and (c) higher prices of tradable goods, particularly foods consumed in the cities, would lead to urban unrest.

This research provides survey evidence from 2-3 years after the devaluation to test those hopes and fears. As prior research had shown that the great majority of imported foods are consumed in West African cities and towns, we focused our surveys on these, and asked three questions:

- (1) How did the devaluation's effects differ by major food product group?
- (2) How did the devaluation affect the consumption of poorer and richer strata differently?
- (3) What are the policy and research implications of the findings?

Méthods

The project comprised four case studies:

- (1) The urban Burkina Faso study, undertaken by Kimseyinga Savadogo and Harounan Kazianga of the University of Ouagadougou, involved a survey of 350 households spread over: the capital,

Ouagadougou; a large secondary city, Bobo Dioulasso; and a rural town, Ouahigouya. The survey was undertaken in 1997 with recall to 1993.

- (2) The urban Côte d'Ivoire study, undertaken by Francis Akindes of University of Bouake and ORSTOM, involved a survey of 240 households spread over: the capital, Abidjan; and a large secondary city, Bouake. Three surveys were undertaken, one right after the devaluation in 1994, one in 1995, and one in 1997. A qualitative survey accompanied the quantitative survey.
- (3) The urban Mali study, undertaken by Kassim Singare of IPR and Bino Teme and Ousmane Sanogo of IER, involved a survey of 110 households in the capital, Bamako. The survey took place in March-April 1996, with a recall to 1993. Two informal restaurant sector surveys (done by Malian thesis students) accompanied the quantitative survey.
- (4) The urban Senegal study, undertaken by Bocar Diagana of ISRA and MSU, involved a survey of 80 households spread over: one large intermediate city, Kaolack; and one small secondary city, Tambacounda. The survey took place in May-June 1996, with a recall to 1993.

The sites were chosen because the INSAH collaborators involved in the project had already done consumption surveys in the survey sites before the devaluation, and thus had a comparative base, or had access to results of such studies. In general, the recall of consumption in the pre-devaluation period done in the present surveys concurs roughly with the results of the surveys undertaken before the devaluation.

The timing of the surveys (2-3 years after the devaluation) was chosen to avoid observing short-term responses that would disappear quickly (indeed, this effect was documented in the study of urban Côte d'Ivoire, where three «snapshots» were taken after devaluation, in 1994, 1995, and 1997). The problem with the approach chosen is that the recall period then becomes dangerously long; that is why we chose sites where there were comparable pre-devaluation surveys to serve as reference points. Of course, this means that our survey results should be taken as rough indications of the direction and magnitude of changes in consumption, not precise estimates.

This synthesis was written by Thomas Reardon (MSU) with Bocar Diagana (ISRA and MSU), Francis Akindes (University of Bouaké and ORSTOM), Kimseyinga Savadogo (University of Ouagadougou), John Staatz (MSU), and Youssouf Camara (MSU), on the basis of studies carried out by the late Kassim Singaré (IPR), Bino Témé and Ousmane Sanogo (IER) in Mali; Bocar Diagana (ISRA and MSU) in Senegal; Francis Akindes (University of Bouaké and ORSTOM) and Harounan Kazianga and Kimseyinga Savadogo (University of Ouagadougou) in Burkina Faso.

These studies were initiated by INSAH after the devaluation, with support from Michigan State University and under the direction of Josué Dioné. Financing was provided by USAID, Sahel Regional Programs, Office for West Africa of Africa Bureau (AFR/WA) under the USAID-MSU Food Security II Cooperative Agreement managed by USAID's Global Bureau (G/EGAD/AFS).

Findings

Note that in our discussion, the terms «poor» and «rich» are used as relative measures (lower- versus upper-income stratum).

Staple foods

- (1) **Total cereal intake tended to decline:** three of the four studies showed a decrease -- from slight in Senegal to large in Burkina Faso. For example, in Burkina Faso intake dropped from 259 kg per year per adult equivalent (AE) to 187, or a 28% real decline. Only the urban Mali case showed a slight increase in overall cereal intake per AE. **The greatest declines were suffered by the poor.**

- (2.a) **Three of the four studies showed the intake of rice (roughly half of urban cereal consumption) held steady despite the devaluation,** confirming fears that it would be hard to dislodge the persistent «imported rice habit». **The results did not differ much between the poor and the richer strata.**

The persistence of rice consumption was apparently because: (a) coarse grains have not yet become sufficiently convenient from viewpoint of processing and preparation costs; (b) in the three years following the devaluation, the price of imported rice (relative to that of coarse grains) did not rise as much as had been anticipated at the time of devaluation. These points are explored in more detail by case, below.

- (2.b) **The surveys showed that the shift to domestic rice in urban areas was relatively modest.** This finding did not concord with aggregate (FAO) data, suggesting that some of the shift toward domestic rice could have been «leaked» via informal exports to other countries; alternatively, the discrepancy could reflect data problems that need to be resolved. A third alternative is that rural rice consumption increased and/or rural stocks were replenished. Most evidence suggests that the devaluation raised incomes of certain rural producers of tradables -- e.g. livestock, rice, cotton -- and they may have responded by increasing their consumption of rice, which for many rural areas outside Senegal remains a relative luxury.

- (2.c) **Only in urban Burkina Faso did overall rice intake fall substantially (1996 consumption was half that of 1993 levels).** Nevertheless, the cash food budget share of rice was roughly maintained; this was coupled with a substantial decrease in overall cereal intake, and thus the rice intake decrease was apparently due to impoverishment rather than a change in preferences¹.

- (2.d) **In urban Mali, the survey showed that imported rice intake rose by 12 kg/adult equivalent/year, and domestic rice by 24 kg (to raise the total intake from 72 kg to 108 kg).** The survey showed that most of the increase in consumption of imported rice was by the poorest tercile, and most of the increase in domestic rice consumption was by the richest tercile of households.

There are various probable reasons for the (modest) increase in the poor's intake of imported rice in Mali:

- (a) there were lower rice prices than the rate of devaluation would imply, due to government's reduction of rice tariffs when domestic rice supplies were low;
- (b) the attraction of the poor to cheaper, lower quality imported rice from Asia.

Moreover, there were several probable reasons for the rich's shift to domestic rice in Mali: (a) the supply response of Malian producers made domestic rice more accessible on the local market; (b) consumers formed a taste for this higher-quality rice².

Overall, however, it should be noted that in urban Mali, the relative price of rice-to-sorghum increased immediately after devaluation (relative to the pre-devaluation), but then returned to its pre-devaluation level by 1997, a year after the survey. Hence, rice maintained its place due to a combination of persistent habits of rice consumption (based on convenience and taste) combined with the moderation of relative rice price increases.

- (2.e) **In urban Côte d'Ivoire, rice intake stayed steady between 1995 and 1997 (and similar to pre-devaluation levels);** the survey noted that there was almost no shift in rice quality in the respondent households³.

- (2.f) **In urban Senegal, where almost all the rice consumed is from imports, rice intake changed very little -- only dropping from 110 to 100 kg/AE/year, or 9%.** As in the Mali case, the relative price of rice-to-millet rose right after devaluation but then had returned to the pre-devaluation ratio by 1997, a year after the survey.

- (3) **Wheat consumption dropped very substantially after the devaluation, in every case study.** Wheat bread and noodles were luxury imported foods (unlike rice) before the devaluation, so this change mainly affected the upper income groups.

- (4) **Overall, local coarse grains (maize, millet, sorghum) showed only slight to very modest gains in urban diets due to the devaluation.**

¹ The decrease observed by the surveyed households was not reflected in aggregate data (from the FAO on-line database), which showed rice consumption (by disappearance) holding steady around 120 thousand tons nationally, every year from 1991 to 1996. However, the share of imported rice in total national rice consumption declined from 75% in 1991-93 to 62% in 1994-6. The discrepancy between the national and the urban survey data may imply that domestic rice was consumed in rural areas or exported informally.

² Again there appears to be a discrepancy with aggregate data -- FAO aggregate data reflected a nearly steady share of imported rice in total at about 10% every year from 1990 to 1996 (with the exception of 1994 with a very low share, and 1991 with a very high share, the latter because the transition government encouraged rice imports, at lower tariff rates, to get badly needed tax revenues.)

³ However, FAO aggregate data reported a shift from an average of 46% of imported rice in total for 1991-1993, dropping to 35% for 1994-1996 -- hence a shift toward domestic rice at the national level, as one would expect. That suggests, as in the Burkina Faso case, that the shift toward domestic rice was not occurring in the main urban areas.

(4.a) **Perhaps the main consumption-side, coarse-grain «success story» of the devaluation was that consumers tended to shift from rice to maize in urban Burkina Faso.** Maize intake rose 30% as compared to only 15% for millet/sorghum. This was especially desirable given that maize is the bright prospect in the Sahel on the production side (in favorable agroclimatic zones). Yet this exception to the lackluster results for coarse grains in general and maize in particular only occurred in Burkina Faso. The question of «why» should be followed up on.

(4.b) **As for millet/sorghum, there was little evidence that consumers shifted into these as a result of the devaluation.** The exceptions were local, and the picture was mixed. Consumers in Tambacounda, Senegal, shifted from maize to sorghum, and those in Kaolack, Senegal, simply reduced millet intake (while in both cities, consumers maintained intake of imported rice). In Bamako, Mali, consumers made a small shift out of maize and sorghum and into rice (both imported and domestic).

In part, the failure to shift from rice to millet and sorghum reflected the smaller shift in relative prices among these grains than was anticipated by policy makers at the time of the devaluation.

(5) **Fonio, a local crop, gained in a few locations,** such as among the rich stratum consumers in urban Mali. This may portend possible future gains for fonio, and should be investigated further.

(6) **Roots, tuber, and plantain consumption did not receive a substantial boost from devaluation, contrary to expectations.** This was mainly an issue in urban Côte d'Ivoire, the only case study where are yams, cassava, and plantains are main staples (constituting about 20% of the at-home food budget). As with rice, consumers tended to increase cash expenditure on these items to keep pace with inflation, defending their intake levels.

Non-Staple Foods

(1) **Most of the studies (urban Côte d'Ivoire, Mali, and Senegal) showed an alarming reduction in the quality of the diet -- a «de-diversification», that particularly affected the poor.** This means consumers defended basic staples by reducing:

(a) meat/fish overall intake, without a concomitant increase in pulses to offset the protein loss,

(b) butter/oils intake,

(c) the vegetable/fruit budget.

This suggests that the poor's strategies of defending caloric intake in the face of food price inflation meant that their diets suffered losses in proteins, lipids, and vitamins. Research prior to the devaluation had shown that the West African poor were already among the world's most deficient in these elements of dietary diversity.

(2) While the families' diets on average became less diversified, **certain household members (particularly the heads of households) went more frequently to informal restaurants to recapture the diversity of their**

diets. All the study results (with the exception of Senegal) showed this individualized response. The Ivorian study noted, however, that this increased individualized use of restaurants was just a short-term manifestation of a longer-term greater reliance on these restaurants by West African urban consumers. This increased reliance on small, informal restaurants has been spurred by changes in the structure of employment, by women entering the workforce outside the home, and by the same need for convenience foods that has long bolstered the demand for rice.

(3) **Meat intake suffered a significant decline in diets in all the case studies -- and the decline was especially important among the poor.** Devaluation led meat prices to rise sharply, in part because Sahelian cattle became much more competitive in coastal markets relative to imported beef from Europe. (See the brief by Mbaye Yade on the impact of the devaluation on the livestock/meat subsector.) For example, beef intake fell from 18 to 15 kgs/year/AE among the poor in Abidjan (but the rich's intake stayed steady at about 22 kg). In urban Senegal, meat intake (from beef plus small ruminants) fell from 16 to 8 kgs/AE/year (50% drop), with the poor's intake falling from 6 kg to 2 (66% drop), and the rich's from 34 kg to 20 (40% drop).

(4) **Consumers compensated (sometimes only partially) for the meat intake decline by shifting toward processed fish (as opposed to fresh fish).** Processed fish is cheaper than meat, and smoked and dried fish is made from the poorer grades of fish. For example, urban Malian consumers maintained total intake of meat/fish (at 30 kgs/AE/year), but changed the product mix moderately from meat to processed fish. Note that imported fresh/frozen fish dropped sharply in Côte d'Ivoire, reflecting its higher CFA franc price following the devaluation.

(5) **Canned milk (an import) was nearly eliminated by the devaluation from the diet in all the case study sites. However, there was not much evidence of a shift toward local fresh milk or processed milk products. This is troubling because there did not appear to be an adequate substitution toward domestic milk products after the sharp reduction of imported milk.**

The only exception to the latter, and perhaps an indication of future potential for local fresh milk, was among the poor in Tambacounda, Senegal. However, the importance of the finding should be kept in perspective -- as fresh milk consumption in that area is very seasonal, is very small, and is confined to a certain ethnic group.

(6) **Consumption of imported vegetable oils declined and consumers increased or maintained intake of local oils/butters.** A case of an increase in local oil/butter was that of urban Mali, for sheanut butter. A case of maintenance of local oil/butter is that of urban Côte d'Ivoire for palm oil and peanut butter, but overall oil/butter intake dropped because imported vegetable oil intake fell.

(7) **Vegetable consumption declined (in terms of levels and budget shares) in several case studies:** in Senegal, a slight decline, in Côte d'Ivoire and Mali, a decline, mainly among the poor.

The Côte d'Ivoire study estimated the real impact of this as a shift from 24 kg a year per AE in Abidjan to only 19 in 1997, and from 29 kg to 25 in Bouake. In that study's qualitative survey, consumers said that they had reduced the diversity and quantity of the condiment sauce in order to defend the levels of their staples intake. Moreover, several case studies showed that there was a sharp reduction in the diversity of vegetables consumed, hence the variety of vitamins (with a reduction of intake of the more expensive items such as eggplant, potatoes, and carrots).

Implications

(1) A worrying finding for policymakers to note is that the food consumption of the poorest 1/3 of the urban population suffered in two ways from the food price increases caused by devaluation:

- cereals, hence caloric intake, declined somewhat;
- diet diversity, in the form of proteins, lipids, and vitamins, declined even more to defend caloric intake levels

This suggests that the poverty alleviation agenda receives a strong boost and urgency from the consumption research findings.

(2) That rice defended its position in Sahel and coastal urban diets, and coarse grains had a lackluster showing after the devaluation, is evidence that the devaluation was far from a panacea in resolving the persistent attraction of imported rice and the concomitant trade deficit woes that it entails. In policy research before the devaluation, the fear was voiced that an increase in the rice price, from either protection or devaluation, would probably not succeed in reducing imported rice consumption.

This fear was borne out by most of the present studies. It appears that consumers defended their rice intake for several reasons:

- rice is attractive to urban West African consumers because of its convenience, including rapidity of processing and preparation. These characteristics are important to urban families whose employment structure demands fast food -- as is the case in most urban centers in the world. The coarse grains subsectors are not yet geared to providing for this need;
- the relative price of rice (to that of coarse grains) spiked upward right after devaluation but then trended downward as coarse grain prices rose. The latter occurred partly because of surprisingly substantial increases in intra-regional tradeability of coarse grains, and partly because coarse grain supply response was limited in the short run.

That means

- ***that the economics and technology of agroprocessing of coarse grains needs to return to the center of the cereals debate in West Africa.***
- ***that increased emphasis on the capacity of local coarse grain and domestic rice producers to respond to incentives needs to be increased.***

(3) ***The news from the consumption perspective was not all bad, however. We observed significant shifts away from imported products, in some cases toward local products:***

- a partial shift from rice to maize in Burkina Faso
- a greater increase in domestic rice than in imported rice in Mali
- a shift from imported vegetable oil to local butters in Mali and Côte d'Ivoire
- a general move away from imported canned milk, but - not yet - a significant shift into local fresh milk
- a shift from imported fresh/frozen fish to local processed fish in Côte d'Ivoire

However, the shifts were often partial, or there was sometimes an abandoning of products that became too expensive but which were not replaced by a cheaper alternative to maintain the same nutrient intake (as in the fresh milk illustration, above). Hence it is important to note where the shifts occurred and ***undertake subsector studies to determine where the bottlenecks exist to consumer access to products, and to producer supply response and to find ways to reduce those bottlenecks.***

(4) ***The informal restaurant sector*** is important for diet diversity under times of economic stress, for employment, and is a ground for testing new convenience forms of local products, and deserves more attention by policymakers and researchers.