Food balance and food security in Guinea-Bissau

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Guinea-Bissau is placed by the ONU in the group of Low-I*ncome Food-Deficit* Countries (LIFDCs). Country- member of the West African Economic and Monetary Union (UMOA), in 2009, it has 1.6 million people and 376 Euros of GDP per capita. Near half (46%) of the production has origin in Agriculture, Forestry and Fishery, and the cashew nut represented 91% average from 2006 to 2009 year on exportations.
Since 2006 to 2009, the exports covered 61% of imports which in addition to services and incomes deficits keeps the current account negative, in 2009, near the 5.8 % GDP, passing, without donations, 13.4% GDP.

Table 1 – Guinea-Bissau Current Account since 2006 to 2009 (million CFA Francs)

Current Account	Average/year 2006 to 2009	2009
Goods	- 31.643,3	- 38.097,0
Services	- 19.879,0	- 25.378,0
Income	- 5.265,5	- 5.197,0
Current transfers	39.073,8	46.251,0
Current account	**- 17.714,0**	**- 22.421,0**
Current account without donations	**- 36.032,5**	**- 52.077,0**

Source: BCEAO (2010), Balance des Paiements et Position Extérieure Globale

Against this background of recurrent negative current account accumulating foreign debt, the balance of trade in food products of Guinea-Bissau is positive. There is a surplus both in what regards all food and between the cashew nut exported and imported rice. This surplus is still more impressive than the last. Although there should be a tendency to decrease in those two positive balances when comparing the average of recent years with the previous three years, its existence contradicts, however, some common sense statements which consider that the export of cashew does not offset the loss in rice production.

Table 2: Balance of food account, since 2003 to 2009 (million CFA Francs)

Balance	Average per year 2003 to 2005	Average per year 2006 to 2009
Food goods account	20.857,27	14.134,50
Cashew nuts exports – rice imports	26.796,93	21.832,15

Source: BCEAO (2010), Balance des Paiements et Position Extérieure Globale.

However, this situation requires a reflection on three questions:

First, the dependence on food imports, especially rice, which prices have shown an upward trend affecting not only the position of external balance, as the incomes of people who do not produce them; Second, the large dependence of Guinea-Bissau on the export of cashew as a source of foreign exchange for both, food and manufactured products imports, and their submission to market conditions which are not controlled; Third, the importance the cashew presents as a complementary source of income for agriculture households, sensitive to the conditions of international markets and to the extension of local trading and storage process.

The food prices and market configuration

The import of food and the impact that rising prices may have on family budget justifies the presentation of the main features of global food market specially, cereals. More than half of cereal production (56%), from 2006 to 2010, was made by developing countries. But, according to FAO data, the percentage of utilization of cereals was higher (61%). These countries consumed more than its total production.

Table 3 - Average annual production and utilization of Cereal between 2006 and 2010

	Production		Utilization	
	Million tons	%	Million tons	%
Total World	**2.172,7**	100%	**2.154,6**	100%
Developing Countries	1.210,2	56%	1.318,4	61%
Developed Countries	962,5	44%	836,2	39%

Source: FAO, Crop Prospects and Food Situation, February 2010 e Mars 2011.

On the other hand, developed countries have maintained a surplus from 2006 to 2010 near 126.3 million tons, average.

Table 4 - Difference between the average annual Cereal production and utilization (2006-2010)

Difference between Production and Utilization	Million tons
Developing Countries	-108,2
Developed Countries	126,3

Source: FAO, Crop Prospects and Food Situation, February 2010 e Mars 2011.

This asymmetry in surplus distribution has also consequences on the international grain trade. Developed countries are concentrating more than 70% of cereal exports.

Table 5 - Average annual exports of Cereal between 2006 and 2010

	Million tons	Percentage
World Exports	**270,2**	100%
Developing Countries	77,6	29%
Developed Countries	192,7	71%

Source: FAO, Crop Prospects and Food Situation, February 2010 e Mars 2011.

Moreover, about 28% of imports are made by Low-I*ncome Food-Deficit* Countries. From this group, 39 countries in 2010/1, were Africans, accounting for nearly a half the imports of the group.

Table 6 – Cereal import requirements from Low-Income Food-Deficit Countries(LIFDCs) to 2010/11.

	Import requirements to 2010/11 (thousand tons)	% Import requirements	Food aid (thousand tons)
África (39 countries)	**37.179**	**49%**	**2.461**
North Africa	15.625	21%	-
Eastern Africa	6.025	8%	1.712
Southern Africa	1.724	2%	273
Western Africa	11.908	16%	333
Central Africa	1.897	3%	143
Asia (22 countries)	**35.942**	**48%**	**1.050**
Central America (3 countries)	**1.826**	**2%**	**180**
Oceania (5 countries)	**413**	**1%**	-
Europe (one country)	**80**		-

Source: FAO, Crop Prospects and Food Situation, February 2010 e Mars 2011.

The weight of the developed countries in the export of Cereal and the relative weakness of developing countries dependent on its supply gives a dominant position in the international grain market, only mitigated by the local production and reserves. It is also significant that, between 2002 and 2006, the U.S. is the largest exporter of corn, wheat and rice, followed by France, Canada and Australia.

Table 7 – The three largest corn, wheat and rice exporters, between 2002 and 2006.

The three largest exporters	Corn		Wheat		Rice	
	Countries	***%***	***Countries***	***%***	***Countries***	***%***
First	USA	49,9	USA	24,1	USA	81,1
Second	France	11,9	Canada	13,7	China	3,7
Third	Argentina	10,5	Australia	13,2	Uruguai	2,9

UNCTAD, World Investment Report, 2009.

Even though the total cereal exports represents 12% share of the world production, the market is dominated by few large transnational corporations that control the value chain of food production. The companies that dominate the grain trade are part of conglomerates vertically and horizontally integrated, including financial activity (fund management companies, hedge funds). The process of vertical integration of food production, internalize inside value system various stages of production and product or product set valuation segments, whatever its worldwide location. Only part of those activities is included in the agricultural production sector such as plantations and farms, directly integrated by ownership or through supply contracts whose terms are dictated by the dominant firm.

In the grain market, 82% of corn exports are made by three companies: Gargill, ADM and Zen North. Some of these companies dominate the markets of other products and services associated with the food value chain such as international cargo services and shipping of grain, milling and meatpacking.

"The sources of market power for transnational agribusiness are multifaceted, extending beyond concentrated market power. The companies also have privileged access to information, to capital and to political power, all of which help to limit competition by creating barriers to entry." [1] "Through their operations in well over 100 countries, the dominant transnational agribusiness firms have access to information that very few other actors, including most governments, can aspire to. Commodity prices depend not only on supply, but also on forecasts about the future availability of supply. Futures and options markets are risk management tools, helping to offset the exposure of contracting to supply a given amount of commodity ahead of harvest time."(…) "Transnational agribusiness also has access to enormous sums of capital, necessary to cover futures and

[1] FAO (2003), *Trade reforms and food security – conceptualizing the linkages*, Roma: Commodities and Trade Division, 2003, pp122. (http://www.fao.org/docrep/005/y4671e/y4671e0e.htm#fn146)

options contracts, and hence influence the prices by which trade-policy-mediated domestic support and export subsidies are set."[2]

From 2003 to 2008 the international prices of food products suffered a steady climb, with a peak in 2007 and 2008.

Table 8 – Food prices indices (base: 100 = average 2002 to 2004)

Year - Month	Indices	Annual Growth Rate
2006	122	6%
2007	154	26%
2008	191	24%
2009	152	-20%
2010 - May	164	8%

Source: FAO (2010), Food Outlook, June 2010, pp. 90.

"Among the factors responsible for the recent surge in commodity prices rise there are costs of production driven by rising petroleum prices, weather-related production shortfalls in key exporting countries and strong demand growth – including for biofuel feedstocks. These factors occurred against a backdrop of historically low global cereal stocks, driving market prices higher." [3]

Even more, it must consider the importance of market structures. They are dominated by companies with international scale that allows them to influence the options for food or biofuel production, or supply, and may also enhance the tension on the market through financial markets action. Although it can argue that the causal relation with the market capitalization in 2006 and subsequent years, it may however be said there is a correlation between this capitalization and the commodities price. From 2009, the worsening international financial crisis caused the fall of food prices and the same happened with oil.

Guinea-Bissau, like other small countries dependent on food supply and cereal, are at the mercy of the food markets whose dynamics cannot influence.

Cashew nut market characterization

Revenue of cashew nuts does not fully benefit its producers. Exporters of cashew nuts are mainly Indian traders. These set the purchase prices, but the contact and negotiation

[2] FAO (2003), pp. 123.

[3] FAO(2008), The State of Food and Agriculture, Roma: Electronic Publishing Policy and Support Branch Communication Division,(http://www.fao.org/docrep/011/i0100e/i0100e00.htm).

with the producers is made by smaller local mediators, or by representatives of large exporters. How Cambon (2003) refers in a study made on Senegal,"the cashew chain from African producer to Indian exporter is trader-driven. In this type of chain, traders do not use their power to co-ordinate the activities of other enterprises in the chain. They take a less proactive approach and are mostly interested in volumes and maximising their trading opportunities. Therefore, there is much less coordination of the chain from the top, and the chain can be seen as disorganised and prone to inconsistencies in supply and severe price fluctuations."[4]

And by the purpose of producer price fluctuation, Cambon states that "at the farmgate level prices are even more unpredictable and a cause for concern among farmers who cannot predict what they will get for their harvest. Speculation is a reality at all levels of the chain, from farmer to collector through to exporter. Pre-financed middlemen try to speculate with farmers on prices to maximise their margins. They often count on farmers not knowing the dynamics of the market downstream, and prices are determined often by hearsay and rumours. Often buyers are in a position to take advantage of farmers who are needy and are pressed to sell low for some rice."[5]

The dispersion and small size of most producers and their lack of knowledge about the market dynamics are key reasons for its weakness in the negotiating process. Hence, one can explain the existence of different producer prices for the same campaign.

Table 9 - Average prices paid by cashew nut in the last campaign (2007-2008)

Region	Average prices in CFA Francs /Kg
Bafata	124
Gabu	131
Biombo	120
Cacheu	139
Oio	165
Bolama	110
Quinara	108
Tombali	118
Country	**134**

Source: AEDES (2009)

[4] Cambon, Steffen (2003), *Upgrading in The Cashew Nut Value Chain: The Case of The Casamance, Senegal.*(http://organiccashewnuts.com/cashewresearch.htm).

[5] Ibid

The balance of food account in Guinea-Bissau

The available data lead to look with some apprehension at some of the trends observed between 2003 and 2008. The average cashew exports between 2006 and 2009 cover less than 78% of imports of food when compared with 2003 to 2005, and less 147 % of rice imports.

Table 10 - The food imports cover by the export of cashew nuts in Guinea-Bissau, from 2003 to 2009

	2003 to 2005	2006 to 2009
Cashew Nuts Exports (million of CFA Francs)	33.923,60	31.370,45
Food Imports (million of CFA Francs)	13.066,33	17.235,95
- Rice imports (million of CFA Francs)	7.126,67	9.538,30
Cashew Nuts Exports / Food Imports	**260%**	**182%**
Cashew Nuts Exports / Rice imports	**476%**	**329%**

Source: BCEAO (2010), Balance des Paiements et Position Extérieure Globale.

This trend is due to the divergent movement of prices of cashew nuts exported and imported rice. Average prices of cashew nut in the triennium 2006 to 2008 were lower 17% to those prevailing from 2003 to 2005. In the opposite direction, prices of imported rice began higher 14%. This movement is negative for goods account and has a tough effect on the real income of peasants.

Table 11- Average price index of cashew nut exported and imported rice

Indices	2003 to 2005	2006 to 2008
Prices of cashew nut (in CFAF)	100	83
Prices of imported rice (in CFAF)	100	114

Fonte: Author, from BCEAO (2010), Balance des Paiements et Position Extérieure Globale, data.

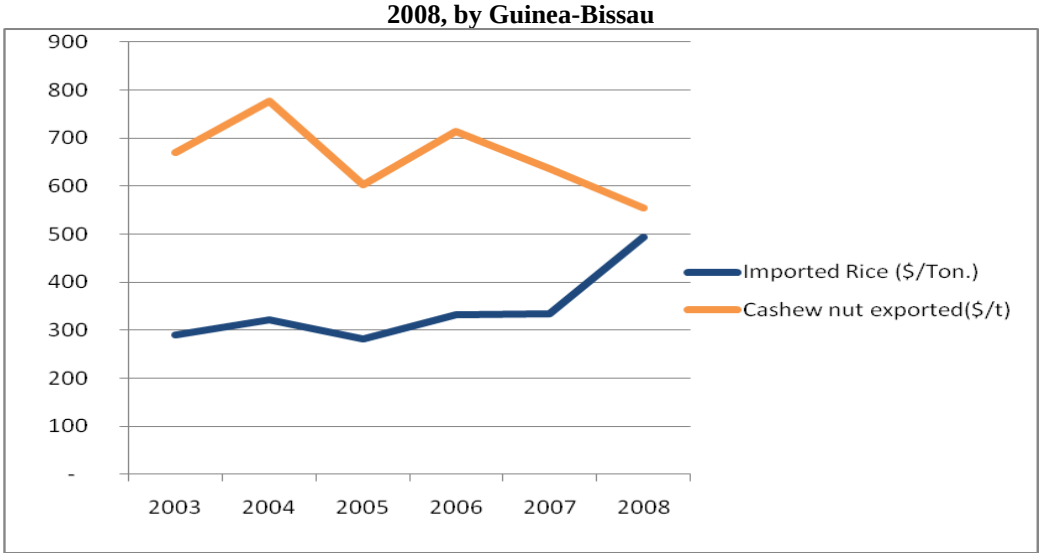
This effect is even more amplified the greater the dominance in local markets of international traders and most extensive the line of intermediation is.

Table 12- Price, in dollars per metric ton of imported rice and cashew nut exports, from 2003 to 2008

Products	2003	2004	2005	2006	2007	2008
Rice Imported ($/Ton)	290	323	282	332	335	494
Cashew nut exported ($/ton)	670	777	602	713	637	554
Correlation coefficient	**-0,516**					

Source: BCEAO (2010), Balance des Paiements et Position Extérieure Globale.

Picture 1- Prices, in dollars per metric ton of imported rice and cashew nut exports, from 2003 to 2008, by Guinea-Bissau



Source: Author from BCEAO (2010), Balance des Paiements et Position Extérieure Globale.

The local exposure to the major exporters' domain can be measured by local prices sensitivity to variation of production. The higher the sensitivity is the greater the rents transferred from years of good harvests are. The international price is an exogenous variable that defines the limits of negotiation for the exporter. The observation of the relation between quantities and export prices, in dollars or francs CFA, confirm those prices tend to be higher to smaller quantities and vice versa.

Table 13- Indices of quantities and prices of cashew exported by Guinea-Bissau, from 2003 to 2009

Indices	2003	2004	2005	2006	2007	2008	2009
Cashew export quantities	100	121	138	101	137	151	179
Cashew price index (U.S. $)	100	116	90	106	95	83	82
Cashew price index (CFA Franc)	100	105	82	96	79	64	67

Source: Author from BCEAO (2010) data.

The analysis of correlation coefficients between quantities and prices confirms the sensitivity of prices to the quantities exported, suggesting the existence of a local negotiating process that helps explain some downward trend of local price when the quantity produced and exported increases.

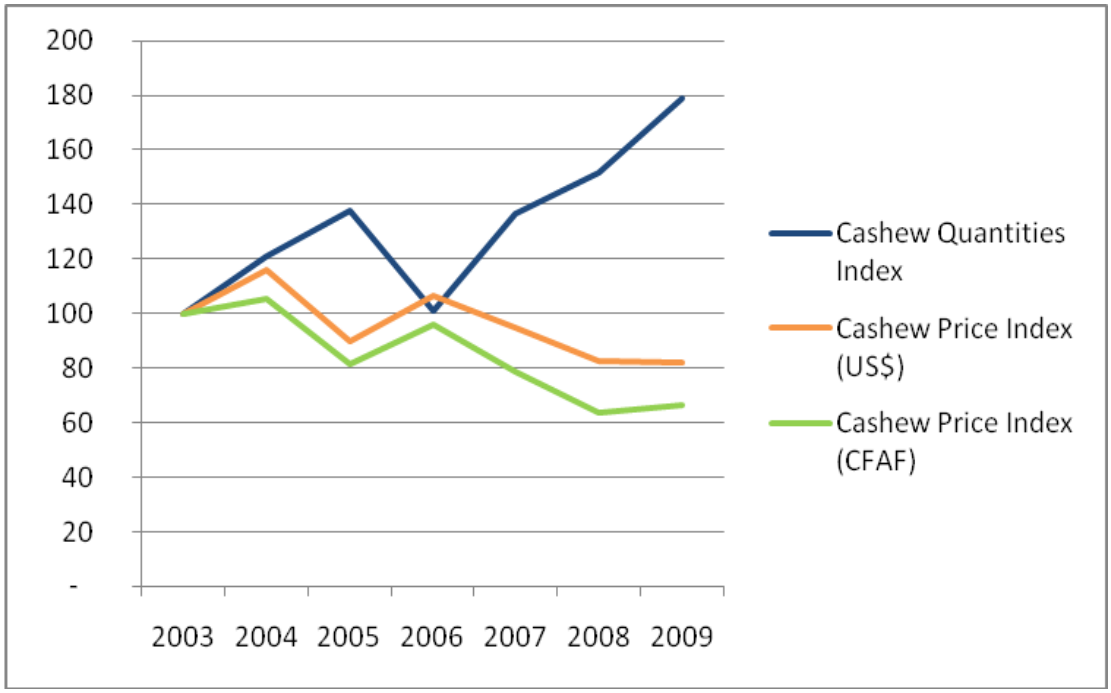
This sensitivity is more evident when the analysis is done in local currency (CFA Franc). Given the high negative correlation (correlation coefficient = -0.86) may be held that the downward trend price of cashew nut seems to be due, not so much the lower prices in the international market, but to the increased production and local supply. Given that the exports are a local indicator of production tendency, in 2009 this was 79% higher than in 2003. In the same period the local price falls 33%.

Table 14- Correlation coefficients between quantities and prices of cashew exports, from 2003 to 2009

Correlation coefficient (Quantities / Prices in U.S. $)	**-0,76940576**
Correlation coefficient (Quantities / Prices in CFAF)	**-0,85665849**

Source: Author from BCEAO (2010) data

Picture 2- Indices of quantities and prices of cashew exported by Guinea-Bissau, from 2003 to 2009



Source: Author from BCEAO (2010) data

This observation, however, omits the effect on the producer price, of local mediators' intervention.

Producer prices and the margin of mediation

The comparison of export prices with the average producer prices, confirms that the formation process of export price passes through a local intermediary process that justifies the difference between the export price and producer price. In the 2008/2009 campaign, the difference was around 119 000 francs per ton. This "intermediation margin" is 89% over the price paid to producers.

Table 15 - Average price per tonne of cashew nuts in Guinea-Bissau, from 2008 to 2009

Average price per ton	Thousands CFA francs	US dollars
Producer	134	292
Exporter	253	552
Difference between the price at the exporter and producer	119	260
% Increase on the producer price	89%	89%

Source: Author from AEDES (2009) and BCEAO (2010) data.

Observing the magnitude of the transfer of value for local "traders", around the 33 million dollars year, near half (47%) of the value of exports, we can see how the "market imperfection" plays to their benefit, affecting the incomes of producers.

Table 16- Total value of mediation in Guinea-Bissau, 2008. (Annual Average)

Cashew nut export	Annual amount in tones	Average Price	U.S. Dollars
The average export prices	127.165,4	552	70.195.301
The producer prices in the 2008 campaign	127.165,4	292	37.194.370
Difference of intermediation			33.000.931

Source: Author from AEDES (2009) and BCEAO (2010) data.

According with the AEDES (2009) survey results, the sale of cashew nut is a complementary source of financial resources for two thirds of agricultural households.

Table 17- Supplementary budget of agricultural households as % of households in 2007

Sale of the cashew nut	66,62%
Livestock sales	40,31%
Sale of cereals	4,87%

Source: AEDES (2009), T.27, pp22.

In 2008, half of agricultural households revealed not to have enough food, a situation that seems to have worsened with regard to 2007.

Table 18 - Food Situation in agricultural households

	2007	2008
Do not have enough food	40,87%	50,67%
Just missing before harvest	44,02%	38,99%
Rarely short of food	10,42%	6,14%
Never short of food	3,35%	4,21%

Source: AEDES (2009), T.28,pp23

Moreover, the same survey reveals that 70% of households consider to be the lack of money the cause from the lack of food.

Table 19– Reasons for the food shortage in agriculture households, the year 2007.

Food shortage reasons	% Households
Lack of money. Lack of work outside the household	70%
Poor harvest. Lack of rain or no rain	55%
Loss of crops, damage caused by animals	42%
Crop loss: flood in 2007	29%
Lack of land or little land	28%
Illness, disability or old age	15%
Another cause	11%

Source: AEDES (2009), T.29,pp24

So, it is admitted that, for a large part of the families of cashew nut producers, the income they receive of their production is not sufficient to ensure food sufficiency. That situation underlines how much the distortion resulting from an asymmetric market has consequences in terms of peasant's food security.

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