

Trade Liberalization and Food Security: For a new green Revolution in Africa

Ismaelline EBA NGUEMA

Faculté des sciences juridiques, économiques

Et sociales-Souissi (University Mohammed v-Souissi), Morocco

ebanguemaismaelline@gmail.com

Giscard ASSOUMOU ELLA

University of Toulon, France

g.assoumouella@gmail.com

Table of contents

1. Introduction

2. Alimentary situation in Africa: Data and Descriptive Analysis

2.1. Access to Food by Country and Household: Availability and Accessibility

2.2. Prices Stability/Volatility: Market failures, Alimentary dependence and Exposure

3. Can Trade promote Food Security?

3.1. Necessary conditions: a fair multilateral Trade, access to markets, Subventions

3.2. Complementary between Multilateralism and Regionalism: common Agricultural Policy, reforming Agriculture in Africa in order to achieve Food self-sufficiency

4. Conclusion

Abstract

The purpose of this study is to provide a framework in order to analyze the relation between trade liberalization and food security in Africa. From the 80s, the Bretton Woods institutions consider trade liberalization as a solution to achieve food security in Africa. In this study, the analysis of food security indicators is based on: availability, accessibility and stability / volatility. The situation is that several years after the application of this trade policy, the goal is still not achieved. Thus, reforming agricultural policies in Africa, a fair multilateral trade, the necessary facilities for the African countries to access international markets, and maintaining complementarity between Multilateralism and Regionalism are necessary conditions to promote food security in Africa.

Résumé

Le but de cette étude est de fournir un cadre pour analyser le lien entre libéralisation commerciale et sécurité alimentaire en Afrique. Depuis les années 80, les institutions de *Bretton Woods* considèrent la libéralisation commerciale comme une solution pour assurer la sécurité alimentaire en Afrique. Nous basons l'analyse sur les indicateurs de sécurité alimentaire que sont: la disponibilité, l'accessibilité et la stabilité / volatilité. Le constat est que plusieurs années après l'application de cette politique commerciale, l'objectif n'est toujours pas atteint. Ainsi, la réforme des politiques agricoles en Afrique, un commerce multilatéral équitable, les facilités nécessaires pour un accès aux marchés internationaux des pays africains et la complémentarité entre le multilatéralisme et le régionalisme sont les conditions nécessaires pour promouvoir la sécurité alimentaire en Afrique.

Keywords: food security, trade liberalization, Africa

JEL Classification: F14 ; O55 ; Q17 ; Q18

1. Introduction

Since the 80s, the Bretton Woods institutions consider trade liberalization as a solution to achieve food security in Africa. The idea is based on the concept of the “comparative advantages”. However, several years after the application of this trade policy in Africa, the goal is still not achieved.

In fact, the conclusion of the “Uruguay round” in 1994 created many hope. The establishment of a food security strategy based on the external exchanges was considered in the Multilateral Agreement on Agriculture (MAA) and in the Agreement on Sanitary and Phytosanitary Measures, and concerning the reduction of the barriers to trade. The recommendations proposed by the MAA should progress in accordance with the process of the multilateral trade negotiations.

In this context, the objective of this paper is to provide a framework in order to analyze the relation between trade liberalization and food security in Africa. Can Trade Liberalization promote Food Security in African countries? Can they resist to the volatility of the international prices of foods in the context of the speculation? Can they maintain the purchasing power of their households in the context of the ambivalence of the trade policies adopted in Africa?

The paper is organized as following: Data and Descriptive Analysis of alimentary situation in Africa are subjects of Section 2. In the Section 3, we analyze in what conditions External Trade can promote Food Security in Africa.

2. Alimentary situation in Africa: Data and Descriptive analysis

For studying the relation between food security and trade liberalization in Africa, we make a brief assessment of the food situation in the continent. To do this, we base the analysis on several indicators of food security: availability, accessibility and stability / volatility.

2.1. Access to Food by Country and Household: Economic and Physical aspects

2.1.1. Availability

Table 1: Demographic changes, Population distribution and Indices of Food Production by Region

Regions	North Africa	West Africa	Central Africa	East Africa	Southern Africa	All Africa
Population 2010 (million)	165,5	304,3	107,6	269,8	163,8	1010,3
Population Growth 2000-2010	1,6	2,6	3	2,8	2,5	2,3
Rural Population (2010)	46,5	55,5	59,4	75,7	55,1	59,9
Rural Population Growth (2000-10)	1,1	1,6	1,8	2,1	1,2	1,7
Urbane Population (2000-10)	53,5	44,5	40,6	24,3	44,9	40,1
Urbane Population Growth (2000-10)	2	4	4,2	4,3	3,1	3,4
Food Production per Capita (Growth) (2009-10)	-4,2	0,9	-0,4	-1,3	0,9	-0,8
Food Production per Capita (Growth) (2009-10) (2000-10)	2	-0,1	-0,1	1,6	0,8	0,8

Source: Data, Food and agriculture, statistical yearbook Africa, 2012, FAO.

Availability is an important indicator to measure the accessibility of food in a country, but it is not sufficient. His analysis requires some attention and consideration of related data concerning the general situation of the population on one hand and food production in Africa on the other. In addition, the situations are different from one region to another in the continent (see [tables 1, 2](#) and [figure 1](#)).

Demography and urbanization are an integral part of the new challenges of food security in Africa. With a total population estimated at 1010, 3 million in 2010, 40% of this population is aged less than 15 years. Thus, Africa is one of the youngest continents in the world. However, this situation represents an advantage and some difficulties for the different governments. If 59.9% are still rural, the rural exodus increases. By leaving the villages, people restrict their chance to eat. This situation reinforces food insecurity in the cities. Between 2000 and 2010, the rural exodus process increases by 3, 4%. The absence of an agricultural policy conducts the rural population to abandon this activity. In these conditions, the cities represent for them an opportunity for working in industry or services. In the [table 1](#) we observe that, between 2000 and 2010, food production increases by 0.8% per capita, but decreases by 0, 9% per capita between 2009 and 2010. The situation differs according the regions of the continent. For example, between 2009 and 2010, the production decreases by 4,2% in North Africa, and it increases by 0,9% in West Africa.

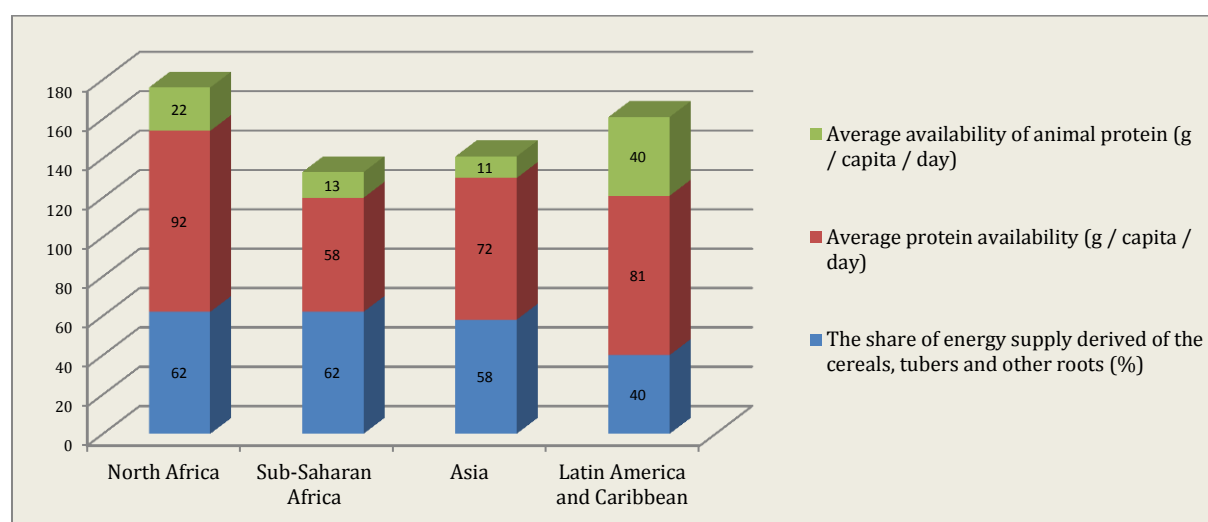
With a total population estimated at 304, 3 million, 55, 5% of the rural population, West Africa is one of the least developed regions of the continent. Between 2000 and 2010, its food production decreases by 0.1% per capita. However, a low food production doesn't directly imply to food insecurity. In the early 80s, Africa opted for international trade. Thus, it is necessary to take into account the imports of foods and the domestic production in order to analyze the food security problem in this continent.

Table 2: Energy supply by Region (kcal /capita/ day)

Years	1990-92	1992-94	1994-96	1996-98	1998-00	2000-02	2002-04	2004-06	2006-08	2008-10
World	2600	2620	2660	2680	2700	2710	2740	2760	2800	2810
North Africa	3060	3070	3120	3170	3180	3210	3220	3220	3280	3300
Subsaharan Africa	2150	2170	2180	2190	2220	2240	2280	2330	2360	2370
Asia	2410	2430	2500	2530	2550	2550	2570	2600	2650	2690
Latin America and Caribbean	2410	2700	2730	2740	2780	2820	2860	2890	2910	2940

Source: Data, Food Security Indicators, FAO, March 2013

Concerning energy availability, it has significantly improved in recent years throughout the world. According to table 2, between 2008 and 2010 each person in the world has 2,810 Kcal per day in average. With an average of 3200 Kcal per capita / day, the situation in Northern Africa is better compared with other regions of the continent, the Latin America, the Caribbean and Asia. Despite an improvement in average of 200 kcal / day between 1990 and 2010, the situation in Sub-Saharan Africa (SSA) remains below the recommendations of the FAO (2700Kcal / day). With 2370 Kcal / day and per capita, it has less than Asia (2690Kcal / day), Latin America and the Caribbean (2940 Kcal / day).



Source: Data, Food Security Indicators, FAO, March 2013

Figure 1: Energy by source of supply (2008-2010)

According to figure 1, cereals, tubers and other roots remain the main sources of energy sourcing on the continent and cover more than 60% of available calories by day / per capita. North Africa tends to cover the needs in protein of its population in comparison with the situation in Sub-Saharan Africa. Only 58 grams of protein by day / per capita are covered in this region against 92 for North Africa. Less than 14 g / day are an animal origin against 22 gr / day in Maghreb. Africa in the last thirty years significantly increased its availability in protein but less than the other regions of developing world. However, according to Amartya Sen, availability is a necessary condition but not sufficient to achieve food security of the populations. An access to food must be guaranteed.

2.1.2. Accessibility

As to accessibility, there are two important factors: economic and physical. Concerning firstly the economic factor, the evaluation of access to food is measured regarding the situation in the country (or region) and the households (see [tables 3, 4, 5, 6, 7](#) and [figure 2](#)).

Table 3: Evolution of the Trade Balance in Africa by Region 1980-2010

Regions	1980			1990			2000			2010		
	X (%)	M (%)	balance	X (%)	M (%)	balance	X (%)	M (%)	balance	X (%)	M (%)	balance
East Africa	0,344	0,515	-0,171	0,21	0,354	-0,097	0,158	0,255	-0,097	0,208	0,401	-0,193
Central Africa	0,435	0,283	0,152	0,34	0,195	-0,145	0,265	0,114	0,151	0,584	0,317	0,267
Austral Africa	1,397	1,097	0,3	0,783	0,642	0,141	0,576	0,536	0,04	0,638	1,213	-0,088
West Africa	1,647	1,247	0,231	0,628	0,397	0,231	0,476	0,317	0,159	0,671	0,522	0,149
North Africa	2,164	1,518	0,646	1,059	1,042	0,017	0,841	0,732	0,017	1,149	1,213	-0,064

Source: Data, manual statistics CNUCED, 2011

Based on international trade, access to food supposes that the country has the capacity to import necessary food for the households' consumption. According to [1], imports in African countries are essentially composed of foods for the households' consumption. Thereby, using trade balance, the [table 3](#) gives us the import capacity of African countries by regions. Between 1980 and 2010, the share of exports of goods from Africa increases from 5.98 to 3.25 percent. The evolution of the trade balance in certain regions of the continent confirms this trend. Over the same period, East Africa, North Africa and Austral Africa present important deficit, but this situation must be analyzed in taking into account the prices volatility of their major exports.

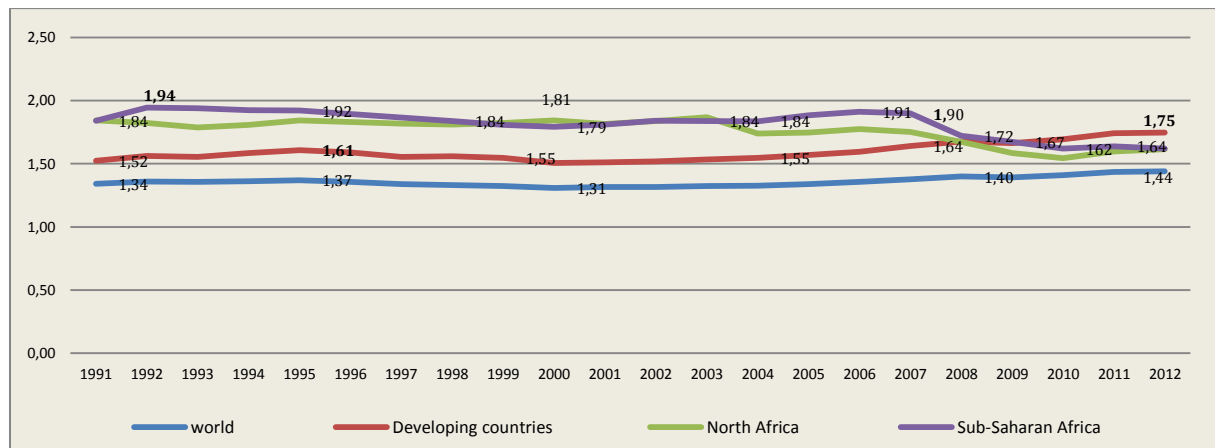
Despite an apparent stability in West and Central Africa, the good results of these regions depend on the demand of the raw materials exported by the countries of these two regions. In general, the problem in Africa is the non-diversification of their exports that are in general composed by the non-transformed agricultural raw materials and the oil. For example, 60% of exports' revenue in Uganda and Libya come from the sale of these types of products. This situation is observed in 11 other countries [2]. In addition with the mono-specialization of the production in African countries, the debt in percentage of GDP is estimated at 17.7% in North Africa and 22.6% in Sub-Saharan Africa. The debt/GDP ratio is more 18% in the poorest countries [3].

Between 2007 and 2011, among the 53 countries of the continent, only 15 have a surplus of food products. The situation is worrying in Sao Tome and Principe, Djibouti, Burundi, Sierra Leone, Eritrea, Lesotho, Comoros, and Botswana. These countries record a double deficit: agricultural (commodities) and food. The countries such as Benin, Mali, Chad, Togo, and Burkina Faso essentially depend on the export of a single commodity: the cotton [2]. Thus, they are exposed to the fluctuations of its prices. In this context, it is clear that food security policy based on external exchanges, as it is currently conducted in Africa, is not an efficient solution. Now we evaluate the access to food by the households. Poverty, per capita income, income inequalities, domestic food prices index are the main indicators of access to food by the households.

Table 4: Some indicators of Poverty, Prices, and Income Inequalities

Regions	Human Poverty Index			GNI per capita \$			Gini index of GNI per capita	Proportion of the population living with less \$ 1.25 by day (%)		
	1995	1998	2007	1995	2005	2010	2002	1990	2005	2010
Central Africa	38,5	40,0	34,0	336	450	694	29-61	/	/	/
East Africa	44,3	40,2	32,2	219	340	604	38-57	/	/	/
West Africa	43,7	41,7	38,8	288	565	989	37-63	/	/	/
North Africa	32,7	30,9	22,9	1116	2001	2916	/	1	3	5
Austral Africa	40,4	30,9	30,2	1579	2051	2825	37-63	/	/	/
Sub-Saharan Africa	/	/	/	/	/	/	29-71	48	52	56

Source : African gender, poverty and development, Volume XIII, BAD, 2012; Rapport objectifs du millénaire pour le développement, PNUD, 2013 ; Food and agricultural, statistical yearbook, FAO, 2013 ; Rapport principal, Sécurité alimentaire et développement agricole en ASS, Dossier pour l'accroissement des soutiens publics, 2006.



Source: Data, Food security indicators, FAO, 2013.

Figure 2: Domestic Food Prices Index

In 2010, while the euro zone was officially declared in stagnation, Africa had over 5% of growth rate [3]. The positive growth in Africa comes from the higher prices of some raw materials since early 2000. It had a positive effect on poverty. In the table 4, between 1998 and 2007, the human poverty index decreases by 4.3 points of percentage. Despite some regional disparities, GNI per capita increases across the continent. Between 2005 and 2010, it increases by 54.22% in Central Africa, 77.64% in East Africa, 75.04% in West Africa, 37.73% in Southern Africa and 45.72% in North Africa. However, the growth in Africa is not always inclusive and this indicator is unreliable to measure the purchasing power of the population. Excepting North Africa, the Gini coefficients are relatively high, as well as variations of GNI that are between 37 and 63. The monetary poverty increases. While only 5% of the population lives with less \$ 1.25 per day in North Africa, this proportion is 56% in Sub-Saharan Africa with an increase from 5 to 8 of percentage points between 1990 and 2010. Thus, many households have the difficulties to access to food. In the figure 2, we observe that the food prices index increases by 1.6% from 1990 to 2012. This situation can be explained by the fluctuations of the international prices of grain and other commodities, and the non-interventionism of the government.

Table 5: Percentage of Population living below the Poverty line in some African countries

	Egypt	Ivory Coast	Mauritania	South Africa
Years	2008	2008	2008	2009
Rural Population	30,0	54,2	59,4	55,4
Urban Population	10,4	29,4	20,8	24,4
Total Population	22,0	42,7	42	50,6

Source: Data, African gender, poverty and development, Volume XIII, BAD, 2012.

Populations are unevenly affected by poverty according to their geographical location. In Egypt, Côte d'Ivoire, Mauritania and South Africa, more than 50% of concerned populations live in rural zones (see [table 5](#)). Their situation is still most complicated with the difficulties related to the absence of the roads and other vital physical infrastructures.

In Africa, access to food depends of the existence of some physical infrastructures: roads, ports, airports and customs regulations. These factors have a significant effect on the prices in increasing the cost of food products transportation.

Table 6: Procedure, Delays, and costs of Imports in regions, 2009

	Documents of imports (number)	Time to import (days)	Costs of imports (in \$ by container)
OCDE	5,1	11,4	1132,7
East Asia and Pacific	7,1	24,5	948,5
Latin America and Caribbean	7,4	22,3	1384,3
Oriental Europa and Central Asia	8,3	31,7	1822,2
North Africa	7,6	26,7	1204,8
Sub-Saharan Africa	8,8	41,1	2278,7

Source: CNUCED 2009; World Bank, 2009.

Besides the physical infrastructures, the natural and geographical factors also determine the access to food. 35% of African population lives in landlocked territory. Costs of trade in landlocked countries are particularly high. Imports and exports must support the transport costs and the taxes of the countries where they pass. According to [\[4\]](#), the transport cost in Malawi is between 0.065 and \$ 0.075 per km. It is two or three times higher than the situation in South Africa. In the [table 6](#), we observe that the costs of imports are most important in Sub-Saharan Africa in comparison of the other regions. The isolation can also be intra-territorial or unevenly affected the populations in the same territory.

Table 7: Indicators of Physical access to Food in sub-Saharan Africa

Regions	Road network in relation to the population (1000 km of roads / capita)			Ratio of roads paved / on the entire road of the network (%)	Rural population with limited access to roads and markets (%)
	1975-84	1985-94	1995-02	2010	2002
Central Africa	5,3	4,7	4,3	/	43
East Africa	2,7	2,6	2,3	/	35
Austral Africa	6,1	8,2	8,4	/	35
West Africa	2,8	2,5	2,4	/	19
Sub-Saharan Africa	3,5	2,8	2,6	12,1	/
North Africa	/	/	/	68	/

Source: African Development Bank Report Rapport, 2004; World Bank – Development Indicators for Africa, 2004 and Ataman, E., «GIS-based analysis of population distribution and access to marketing infrastructure, by pixel.» FAO, The little data book on Africa, World Bank, 2010

In addition to the economic situation, the quality of the infrastructures also determines the access to food by the households in Africa. Many people in Sub-Saharan Africa live in insolated regions, away from roads and markets. If the roads exist, they generally are in bad conditions. In 2002, 43% of Central African populations have the difficulties to access to roads and markets, 35% in East Africa and Southern Africa and 19% in West Africa (see [table 7](#)). The populations that live in isolated zones migrate to the cities or practice the subsistence agriculture, but in the period of drought, pest attacks, flooding ... they are decimated by the famine. In 2004, despite a good harvest, two million of Ethiopians were reported in food crisis. The problem comes from the

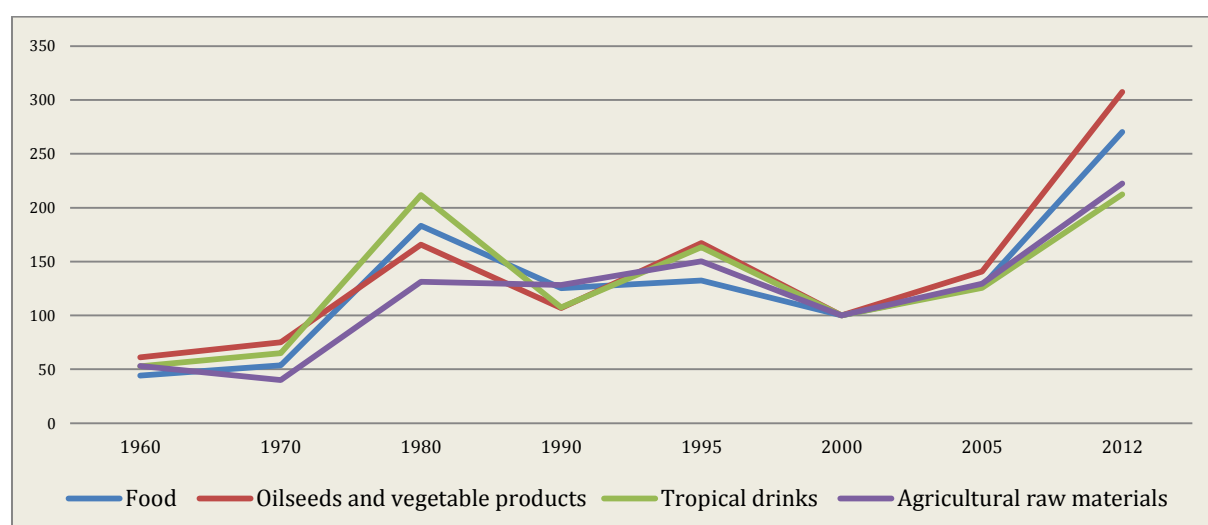
difficulties to transport the food from abundance zones to zones in crisis [5]. Paradoxically, the populations affected have easily access to international food aid rather than the national reserves [6]. This probably is an important point that government and donors should give importance: is it advantageous to finance the road infrastructure projects in order to connect the abundance zone and the zone in crisis instead of financing the transportation of the aid?

2.2. Prices Stability/Volatility: Market failures, Alimentary dependence and Exposure

In the recent years, the notion of stability has been enlarged at the problem of the exposure. Now, food security is measured in taking into account the volatility of the food prices. Market uncertainty exposes people in situations of dependency to potential rupture. Yet, Africa seems to be more dependent to the imports and exports. This situation increases the vulnerability of the populations already exposed to the majority of the risks that go beyond the market.

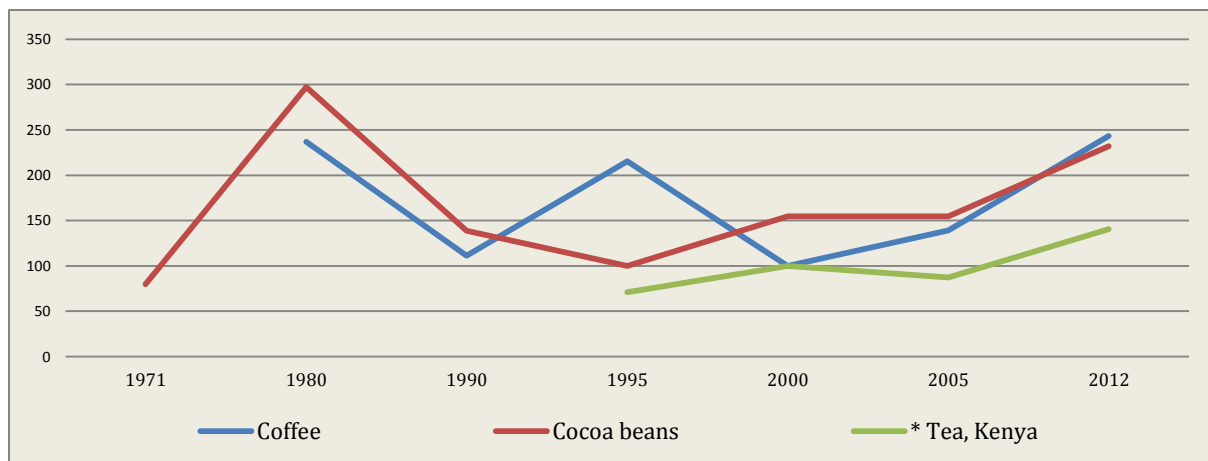
2.2.1. Market failures

During many years, various textbooks and journals analyzed the risk using the geographic, climatic, political and institutional factors, armed conflict and isolation territorial ... However now; the focus is on the market failures. This change in approach is due to the recent evolution of the agricultural product prices on the various stock exchanges.



Source: CNUCED, UNCTAD stat.

Figure 3: Evolution of the food and agricultural commodities price indices (2000 = 100)

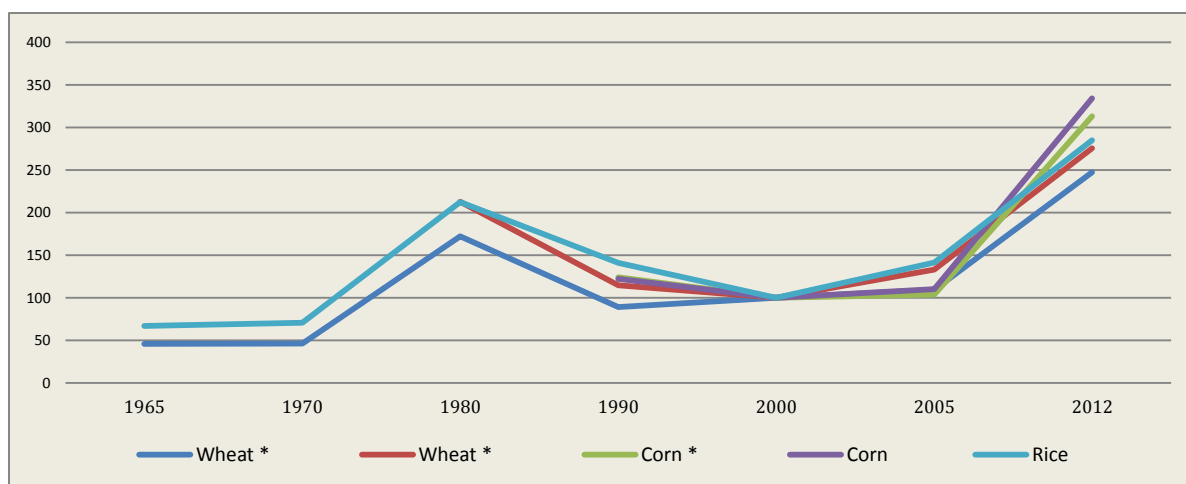


Source : CNUCED, UNCTAD stat. Thé*, Kenya, BPF1, cours aux enchères à Mombasa (€/kg), Fèves de cacao, moyenne journalière des prix New York/Londres (DTS/t), Café, prix indicatif composé OIC (€/lb.).

Figure 4: Evolution of the some tropical crops price indices (2000 = 100)

While the period 1990-2002 was marked by a decrease in food prices, a turning point is observed since 2006, year in which the food prices increase of 19%. Similarly, 2007 is marked by an increase by 7.8%. However, a slowdown was observed during the first semester of 2008. But at the end of this year, the food prices spectacularly increase of 42 %. 2009 is characterized by a relative stagnation in the prices' fluctuations, and the increase starts again in 2011 (see figures 3 and 4). In this context, it is observed that the alimentary market is unpredictable and the food prices more volatile. This situation is perceptible in the developing countries and Africa particularly. According to [7], in comparison of the 1990-1992' period, the proportion of the undernourished people in Sub-Saharan Africa in 2010-2012 increases by 5 points, and of 1 point in North Africa. This is in general due to the exposure of the countries to the fluctuations of the prices. The poorest countries that essentially dependent on the exports of agricultural products are most exposed. The growth in the countries oil producers is positively impacted by the increase of the oil prices in disfavor of their food balances. In the first group of the countries, the prices volatility discourages the farmers to invest [8]. The second group is impacted by the "Dutch disease". According to [9], by 2019 the prices of agricultural products will expect to be higher than in 2007/2008. This situation will be possible due to the increase in the demand and the supply uncertainty. However, the development of the biofuels, the changing of alimentary regime in some developing countries, the instability of the exchange markets and the population growth contribute to increase the demand and also the speculation. This situation inevitably impacts the supply. Despite a constant level of the production and the gradual recovery of the cereal stocks, the uncertainty conducts the conventional investors to be pessimist and therefore less innovation. Moreover, the difficulty of realizing the Doha Round has also contributed to reinforce the speculation. Nearly nineteen years after the conclusion of the Uruguay round, the principal objective is not concretized: the stabilization of the market. Thus, more regulation could decrease the speculation, but the most important will be the capacities of the African countries to make adapted policies for reducing the exposure to the shocks of alimentary market in order to guaranty alimentary security at the populations.

2.2.2. Alimentary dependence and Exposure



Source : CNUCED, UNCTADstat, Blé, Argentine, trigo pan Upriver, F&AB, Blé*, États-Unis, roux d'hiver ordinaire n° 2, F&AB Golfe du Mexique, Maïs*, Argentine, Rosario, F&AB, Maïs, États-Unis, jaune n° 3, F&AB Golfe du Mexique, Riz*, Thaïlande, blanchi, 5% de brisures, prix nominal, F&AB Bangkok.

Figure 5: Price index of some grains on the open market (2000 = 100)

The other element for analyzing food security in Africa is the level of the external dependence. An important external dependence conducts the countries to be most exposed. The economies of rent and the poorest countries are more exposed. Moreover, the situation in the alimentary market in the recent years should encourage African countries to adopt food policies that reduce external dependence. Despite some regional initiatives like the CAP of West Africa (ECOWAP), African economies continue to be more extraverted despite their little import capacities. Thus, food security will be one of the big challenges in Africa. In fact, while the prices of the three major cereals, wheat, corn and rice, constantly increase, the share of cereal imports are relatively higher (see figure 5). The dependency ratio in North Africa is estimated by 50% by the FAO. However, this level hides the disparities between the countries: Algeria (70.7%), Libya (91.8 %), Tunisia (60.2), and Morocco (53.6). In the first three countries mentioned, despite a high level of dependence, oil revenues finance their deficits.

Table 8: Imports of cereal / dependency ratio in Africa and the world (%)

	1990-92	1999-01	2007-09
World	14,6	15,2	15,7
Africa	26,9	29,8	30,1
North Africa	43,2	52,8	49,9
Sub-Saharan Africa	18,0	18,3	21,5

Source: Food security indicators, FAO, 2013

Sub-Saharan Africa has a relatively low ratio of dependence (21.5 %), due to the diversification of existing grain in this region: cassava, millet, sorghum, yam ... However, the homogenization of the consumption in accordance with “the Western way of life” and the imports of the wheat and the rice contribute to the reduction of the consumption of these crops and therefore their production. This change in alimentary regime increased cereal imports. Some African countries seem to be more dependent. This situation is more observed in the poorest countries. Lesotho (84.8 %), Comoros (69.8%) and Botswana (90.1 %) and Eritrea (58.6%) are the most affected and therefore the most exposed to the volatile of the external food prices (see table 8). In these conditions, Africa must develop domestic agricultural sector in order to achieve food self-sufficiency. This perspective implies political and institutional stability, and therefore the good governance.

Beyond the market, the other factors that create situations of food insecurity exist: political instability, armed conflict and climate disasters... In the recent years, these vectors increased the risks in some regions like sub-Saharan Africa, according to FAO. The poverty increases this violence; and generates prolonged crises in some regions. FAO defines these regions as “the places where a significant proportion of the population is acutely exposed to death, disease and food instability for a long time”. On 22 countries identified by the FAO, 17 are in sub-Saharan Africa. The proportion of the population affected by natural disasters in Lesotho, Swaziland, Malawi, Eritrea and Niger varies between 9% and 7 %. In these countries the prevalence of undernourishment is between 16 % and 23%; excepting Eritrea where it exceeds 60 %. The situation in this country is similar to the zones affected by armed conflict and other forms of violence. According to High Commissioner for Refugees of United Nations, nearly 35% of the population with refugee status in the world is African, Sub-Saharan Africa essentially. The weakness of the institutions, absence of the political legitimacy and the rule of the law reinforce the political instability. Despite some progress, the food security remains a goal in Africa. The situation is not the same in all the regions of the continent. However, the absence of the infrastructures, the persistence of the inequalities, the political and institutional problems, and the climate change conduct the continent to be particularly unstable and exposed to alimentary risks. In this context, trade can contribute of reducing these risks if the production, infrastructures and institutional reforms are adopted.

3. Can Trade promote Food Security?

It is clear from the preceding section that trade is a frail way for obtaining the food security in Africa. Beyond the market failures, the incapacity for the Agreement on Agriculture to set the rules for the development of a fair agricultural trade, Africa seems to be conducted by the Structural Adjustment Program (SAP) in a premature opening policy. The decrease of the measures for protecting the local consumers and enhancing the agriculture deteriorate the performance of the agricultural sector. This situation is reinforced by the mismanagement and the inefficiency of domestic agricultural policies. In our point of view, combined to the policy and economic reforms, the trade seems to be an opportunity for African countries to resolve the food security problem. In this context, the present section makes the concrete recommendations at the multilateral and regional dimensions.

3.1. Necessary conditions: Access to Markets and Subventions

3.1.1. Access to Markets

For a fairer trade, it is important to pay attention to the aspects that could help developing economies to resolve agricultural, poverty and alimentary problems. The current negotiations should take into account the particularly food difficulties in African countries. They must develop the productions for which they have a comparative advantage and control the opening of the sensitive sectors to competition. In the agricultural section of the future “Package Bali”, it will be desirable to give a particular place to tropical products, because they are the main sources of the foreign exchanges for African countries. An access facility to international markets must be accorded to these types of products. The taxes applied in these products should be lower in comparison with those applied to other agricultural products. The aim is to facilitate their

exports. Also, the sanitary and phytosanitary standards must be reduced at the minimum necessary international protection. The interest is to encourage African countries that import food products to stimulate domestic production. To do this, the future agreements of the ASA should accept for these countries to maintain an appropriate protection. Indeed, the tariff levels and the period of adjustment given to emerging countries, such as China, India, Taiwan and Brazil, should not be similar to those accorded to African countries. Moreover, the concept of special products should be redefined and extended to a higher proportion of developing countries. In what conditions is it primordial to declare that a product has a particular interest in a country or for a population? In our point of view, food security aspect must be an important factor. For example, the cereal products required for men or animals in African countries should be included. In this context, developed countries must take this into account in their taxes and subventions policies.

3.1.2. Agricultural Subventions in Developed Countries

The subsidies to farmers in developed countries have the contrasting effects on the international prices of agricultural products. They increase their variability in down. In this context, the farmers in the developing countries that export the similar products are disadvantaged. Thus, the agriculture remains “a lawless zone” where, through subsidies and technologies, the developed economies crush other countries. The necessity for the governments to help their farmers must take into account the situation in the developing countries. If not, it distorts the competition. The agriculture in African countries is not mechanized. Thus, is it normal to compete, in a same market, African farmers and developed countries’ farmers that have a comparative advantage in the technology and the subsidies? The solution would be the suspension of these subsidies, but it is difficult for the governments to do this, taking into account their public opinions and the need to be reelected. In our point of view, the solution can come from African governments; helped by the international organizations.

The aid is a mean to absorb the shocks after an increase in food prices according the Doha round. Also, this is a countervailing measure for the poorer and most vulnerable economies to food insecurity. The objective is not to encourage a form of assistance, but to make an exceptional and temporary measure. The assistance may be financial, technical and supply of food when the situation requires. It is important to create a global fund for the countries at risk. It must transparently be managed. Also, its objective will be of fighting against poverty by financing micro-projects for the development of agriculture. This fund must also be financed by international institutions like the World Bank and IMF.

3.2. Complementarity between Multilateralism and Regionalism: common Agricultural Policy, reforming Agriculture in Africa in order to achieve Food self-sufficiency

The World Trade Organization is formed by the coalitions, agreements and meeting of interests... Thus, it is difficult for a country to get a place if he is not integrated in a more or less powerful group. This is one of the lessons of the Doha round: unity is strength. In a globalized world there is no place for the micro - states or the situations of autarky. The trade gain results in the capacity of a group of countries to harmonize their policies in order to reduce their external dependence. Thus, Africa must reinforce regional and continental integrations in harmonizing

and modernizing the agriculture in order to have an important domestic market. The project of “the United States of Africa”¹ developed by the president Kwame Nkrumah is an opportunity for Africa to be more respected and considered. Thus, in 1991 the African Economic Community harmonized the foundation for an African integration by projecting to create a freedom economic zone in Africa by 2028. In 2001-2002, the African Union and the New Partnership for Africa's Development (NEPAD) were created. One of the objectives of the NEPAD is the agriculture development [10]. The recent international market developments and the blocking of the Doha cycle reinforce the necessity for the African countries to accelerate this integration agenda.

3.2.1. Common Agricultural Policy: reforming Agriculture in Africa

In this section, we examine the issue of the potential implementation of a continental common market in agricultural sector. Given the recent opportunities of the NEPAD project for the development of agriculture, we analyze the benefit of this type of project.

African agriculture has a significant delay compared to the rest of the world. On the 874 million acres of farmland, only 12.6 million are landscaped and irrigated. That is to say 7% of lands; 3.4 % in Sub-Sahara Africa SA and 40 % in North Africa [11]. According to the FAO, in 2005-2007, the average operating capital per worker is estimated at close to \$ 2200 (USD) in SSA, against \$ 10,000 in North Africa and the Middle East. The public spending on agriculture is the lowest in the world. It does not exceed \$ 45 per worker in SSA and rarely exceeds this level in North Africa. This situation conducts to the food insecurity and is the consequence of the deterioration of African agro- food policies. The food extraversion policy led the government to abandon all forms of necessary policy to achieve Food self-sufficiency. In this context, African countries must define a common response for developing a common agricultural policy. The objectives are: the production of the maximum foods needed by the African populations and the reduction of the external dependence. To do this, it is necessary to create a special agricultural fund. The final objectives are to mechanize African agriculture for being competitive and achieving food self-sufficiency. In our point of view, a harmonized agricultural investment will increase the food production and therefore the economic growth. In fact, the general goal is to develop all the types of agricultures for the populations and the animals. That will have the positive effects on the population in terms of well -being. According to [12], the agricultural investment can significantly decrease the poverty of the rural population. Also, this is one of the most important ways to explore for reducing the intra-territorial inequalities. At the social level, the poverty reduction guarantees the political stability and the food security.

3.2.2. More sovereignty for achieving Food self-sufficiency

A transcontinental common market will increase the demand by expanding the domestic market firstly at the sub-regional and secondly at the entire continental. For agricultural sector, expanding the market will favor the production and attract the new investors. The development of

¹ The Arusha Treaty provides the training of the African Economic Community in six stages including: creating blocks in the regions that have not yet by 1999, reinforcing the integrations within the Regional Economic Communities (RECs) and the harmonization of the RECs by 2007; establishment of a Free Trade Zones and a Customs Union within each regional bloc by 2017, coordination and harmonization of tariff and non-tariff RECs for the establishment of a Free Trade Zone for a continental customs union by 2019, creating a Common Continental African Market by 2023; the establishment of an Economic and Monetary Union and a Parliament by 2028. All the periods of the transition must end in 2034 (African Union, 2011).

agricultural research could contribute to ameliorate the quality of the food products and their diversification through the local production of products derived from agriculture.

Agriculture development is a good way for the industrialization, the diversification and the sustainable economic growth. However, all food development policy must respect the international trade agreements and one part of its financing will be by the international organizations, in taking into account the budgets' difficulties of the African governments. That is the problem. In fact, the liberalization policy dictated by the IMF and the World Bank in the context of SAP, then monetary adjustment, contributed to abandon some continental and regional projects. Thus, what is the best strategy for African countries for being respected in the international negotiations? The objective is to get international institutions to accept and finance the development strategies proposed by African government, because the recent African economic history proves that the development policies imposed by the Bretton Woods institutions had not promote development in Africa. In this context, African countries must improve their governances in fighting against corruption and promoting democracy. They must use the raw materials income to finance the diversification of their economies, the transport infrastructures and modernization of the agriculture. Also, a transparent management of the raw materials income will conduct Africa to be less dependent of the external Aid and financing.

4. Conclusion

For studying the relation between external trade and food security in Africa, we describe the alimentary situation in African countries several years after the application of the external trade policy using the existing data. To do this, we use several indicators of food security: availability, accessibility and stability / volatility. The conclusion is that the goal is still not achieved. The external trade policies adopted in Africa have not permitted to resolve the alimentary problem in the continent. In this context, we propose the necessary conditions for which trade can promote food security. In our point of view, reforming agricultural policies in Africa, a fair multilateral Trade, the facilities for an access to international markets and the complementarity between Multilateralism and Regionalism are the necessary conditions for promoting food security in Africa.

References

- [1] Assoumou Ella, G. (2013): "International Crises, Characterization of Contagion and Social Well-Being in Developing Countries: A Theoretical Model", *Theoretical Economics Letters*, 2014, 4(1), 72-77.
- [2] United Nations Conference on Trade and Development (2013): "Intra- African trade: Unlocking private sector dynamism", *Economic development in Africa report* 2013, P31-34.
- [3] World Bank (2010): "The Little Data Book on Africa", *From Africa Development Indicators* n°55201.

- [4] Conférence des Nations Unies sur le commerce et le développement (2009): “Renforcer l’intégration économique régionale pour le développement de l’Afrique », *Le développement économique en Afrique*, Rapport 2009.
- [5] Kidane, W., Maetz, M. et Dartel, P. (2006) : « Sécurité alimentaire et développement agricole en Afrique subsaharienne : Dossier pour l’accroissement des soutiens publics. Note 2 : Cadre conceptuel et empirique », *FAO*, P16-20.
- [6] Ziegler, J. (2005) : l’Empire de la honte, *Fayard*, p173.
- [7] United Nation Program For Development (2013): The Millennium Development Goals Report 2013.
- [8] Organisation des Nations Unies pour l’Alimentation et l’Agriculture (2011) : « L’état de l’insécurité alimentaire dans le monde. Comment la volatilité des cours internationaux porte-t-elle atteinte à l’économie et à la sécurité », Rome, 2011.
- [9] OCDE et FAO (2010) : « Perspectives agricoles 2010-2019 », *OECD-FAO Agricultural Outlook*, P11.
- [10] Union Africaine (2011) : « Etat de l’intégration en Afrique », *troisième publication de la commission de l’Union Africaine*, Juillet 2011, P25.
- [11] Nuhine Dieye, P. (2008) : « Agrovision », *le dossier N°7*, juillet 2008, P17.
- [12] FAO (2012) : « Situation mondiale de l’alimentation et de l’agriculture », *Investir dans l’agriculture pour un avenir meilleur*, Rapport.