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# Chapter 2

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## A historical comparative analysis of commodity development models in West Africa and implications for staple food value chains

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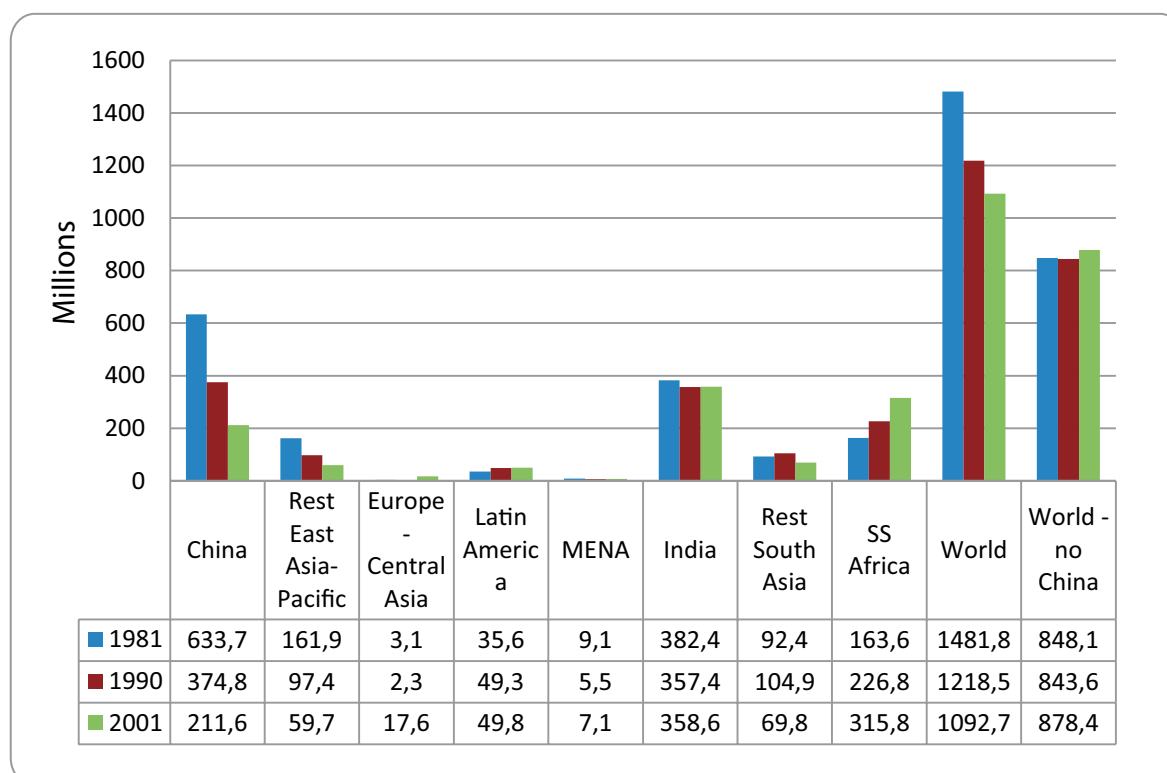
# 1. Introduction and motivation

## 1.1 General context and scene setting

After gaining their independence, West African countries have continued to rely on the same “traditional” export crops (cotton, coffee, and cocoa) that dominated during the colonial administrations. Following the structural adjustment programmes in the 1980s, the state’s interventionist policies in the management of key export sectors were gradually receding, giving way to liberalization and privatization. This development coincided with the emergence of global food value chains driven by agrobusinesses and food retailers in high-income countries. For some West African countries, new opportunities opened up for producing and exporting non-traditional high-value food products (horticulture, floriculture). However, despite the positive impact on participating farmers and local employment benefits, these high-value export value chains have had minimal aggregate impact on the agricultural sector as a whole and could not compensate for the negative impact from the collapse of the traditional export markets.

Another key factor accounting for the deterioration of the export position of West African countries was the continued erosion of competitiveness vis-à-vis other emerging suppliers in the developing world, in both traditional and non-traditional food commodities. For West Africa, the combination of weak levels of agricultural investments, restricted market access in Organization for Economic Cooperation and Development (OECD) markets, and timid engagement by the private sector following the state retreat all contributed to a significant erosion of agriculture performance in the region. The food-deficit situation continued to worsen as populations increased and rapid urbanization continued apace, resulting in ever-growing rural poverty, precarious food security and increasing dependency on food imports (Rakotoarisoa *et al.*, 2011).

For a few years after the conclusion of the Uruguay round in Marrakesh, there was growing recognition among developing countries, especially the poorest ones, that the new World Trade Organization (WTO) agreement failed to live up to its promise and that developed countries had not liberalized agricultural subsidies and labour-intensive industries (textile quotas) as promised. When trade ministers met in Seattle in 1999 to launch a new round, they were met with huge and violent protests that succeeded in derailing the ministerial meeting (Table 1). The protesters did manage to get their message across – that the world was failing in its battle against poverty. Apart from China, the condition of world poverty had barely improved and was particularly devastating for sub-Saharan Africa, which saw the number of people in absolute poverty nearly double, from 164 million to over 316 million from 1981 to 2001 (World Bank, 2004, see Figure 1).

**Figure 1. Growth in population in absolute poverty (less than 1 US\$/day, in millions)**

**Source:** World Bank (2004)

A year after the Seattle meeting, 150 heads of State met at the Millennium summit at the United Nations headquarters in New York to sign the Millennium Development Goals (MDGs), committing to reduce poverty by half by 2015. The fulfilment of the MDGs would require substantial new investments towards basic education, health, infrastructure and agriculture. In 2002, 50 heads of state and 200 ministers, including from industrial countries, committed to raising development aid to 0.7 percent of national gross domestic product (GDP). In 2005, during the G-8 summit at Gleneagles, Scotland, leaders of G-8 countries agreed to wipe out debt owed to the World Bank/International Monetary Fund (WB/IMF) by 18 of the poorest countries (including 14 in Africa).

Within Africa, and in response to the MDGs, at the 2001 summit meeting at Lusaka, Zambia, the leaders of the African Union launched the New Partnership for Africa's Development (NEPAD) – an economic development programme of the African Union. NEPAD articulated four core objectives: eradication of poverty; sustainable growth and development; economic integration; and empowerment of women. By 2003, the Comprehensive Africa Agriculture Development Programme (CAADP), an agriculture component of NEPAD, was launched to improve agricultural productivity in Africa. That same year, during a summit at Maputo, Mozambique, African governments and heads of state endorsed the Maputo Declaration on Agriculture and Food Security in Africa, committing 10 percent of their national budgets to agriculture and rural development. In West Africa, the Economic Community of West African States (ECOWAS), an organization representing 15 West African countries, developed its own regional CAADP, known as ECOWAS Regional Agricultural Policy for West Africa (ECOWAP), to serve as a blueprint for national development and investment strategies for agriculture by member countries (Table 1).

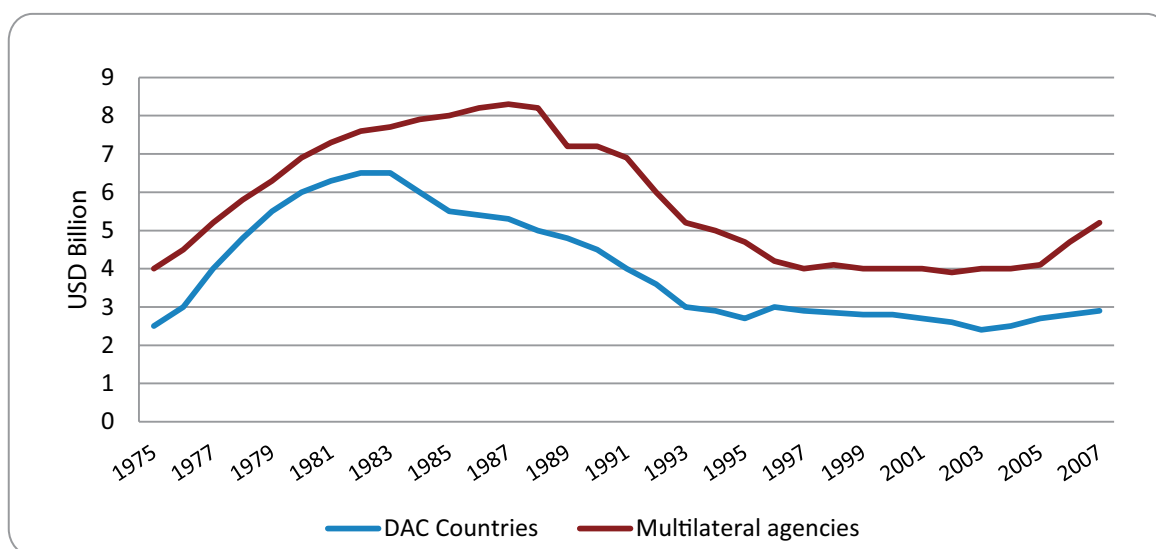
**Table 1. Selected key global and African developments related to agricultural development**

YEAR	PLACE	EVENT
<b>November 1999</b>	Seattle, Washington, USA	WTO ministerial meeting to launch a new round was violently disrupted by protesters
<b>September 2000</b>	New York City, New York, USA	150 heads of states met at the Millennium summit at the UN to sign Millennium Development Goals (MDGs) to halve poverty by 2015
<b>July 2001</b>	Lusaka, Zambia	The New Partnership for Africa's Development (NEPAD), an economic development programme of the African Union, was established (NEPAD's four core objectives: eradication of poverty, sustainable growth and development, economic integration, empowerment of women)
<b>March 2002</b>	Monterrey, Mexico	50 heads of states and 200 ministers, including from industrial nations, committed to raise development aid to 0.7% of national GDP
<b>2003</b>		Launch of the Comprehensive Africa Agriculture Development Programme (CAADP) aimed at increasing agricultural productivity in Africa
<b>July 2003</b>	Maputo, Mozambique	African governments and heads of state endorsed the "Maputo Declaration on Agriculture and Food Security in Africa", committing 10% of national budget to agriculture and rural development
<b>2005</b>	Gleneagles, Scotland	Leaders of G-8 countries agreed to wipe out debt owed to WB/IMF by 18 poorest countries (14 in Africa)
<b>2005</b>		ECOWAS heads of states adopted the ECOWAS agricultural policy (ECOWAP) as an a coordination instrument for CAADP, the agricultural component of NEPAD
<b>June 2008</b>	Tokyo, Japan	G-8 summit set up 10 billion euro fund for agricultural projects, launched a Global Partnership on Food Security and organized the first meeting of the G-8 Agriculture Ministers, to be held in 2009
<b>November 2009</b>	Rome, Italy	FAO organized a global summit on food security following the high food price crisis of 2007/08

**Source:** compilation by authors

Yet progress on the ground was slow and very little impact was felt at the local level by either farmers or small agribusinesses. This is because new investments in agriculture, by either development agencies or national governments, had not materialized. The trend towards decreased aid to and investment in agriculture has continued since the mid-1980s (see Figure 2). This is partly because the new investments committed toward the MDGs were focusing on areas outside of agriculture (health, education, girls' schooling, etc.). Also, the prevailing view among international development agencies was that investments in transport, infrastructure and aid for trade could be more effective in boosting agricultural development.

**Figure 2. Trends in aid to agriculture and rural development (ARD): 1971-2009, 5-year moving average commitments, constant 2009 prices**



**Source:** OECD (2009) Statistics are from Official Development Assistance (ODA) and concessional multilateral flows for the agricultural sector (including forestry and fishing) and rural development. DAC refers to the 24 countries of OECD that are members of the Development Assistance Committee (DAC).

The shift toward agriculture came with the onset of the world food price crisis of 2007/08, which jolted both governments and donors into action. A new consensus emerged quickly, calling for substantial investments to agriculture and rural development and to increase agricultural productivity and meet the challenge of food security, especially among the poor countries, a large portion of which are in sub-Saharan Africa. In 2008, at the G-8 summit in Tokyo, Japan, G-8 leaders set up a 10 billion euro fund for agricultural projects, launched a Global Partnership on Food Security and planned the first meeting of the G-8 Agriculture Ministers, to be held in 2009.

Parallel to the renewed interest and political commitments towards agriculture and food security, African governments also began paying closer attention to basic food commodities in response to heightened concerns over food insecurity and disruptions to food trade flows. Supported by donors and renewed agricultural investments, a number of national initiatives were launched to stimulate the domestic production of staples such as rice, maize and cassava. This represents a major paradigm shift for a region that had traditionally been narrowly focused on export commodities (cotton, cocoa, coffee, peanuts) as drivers for agricultural development.

Yet to develop the staple food systems for food security requires not only stimulating production, but placing equal emphasis on the whole value chain, including processing and marketing. Moreover, a coherent development of the staple value chains for food security would require not just strengthening competitiveness but also ensuring smallholder-inclusiveness to improve incomes more widely. This then requires a different value chain development model than the export cash crop models.

The central purpose of this chapter is to delineate features of a suitable staple food development model in contrast to the traditional export commodity model. Staple food value chains are characterized by a multiplicity of market outlets (self-consumption, sales of surplus to local, regional or international markets) and by dominance of small farmers who typically confront greater difficulties accessing inputs and credit and face higher production and marketing uncertainty and risks. These staple food value chains also lack

the proper incentives to mitigate risks and to provide assurances to agribusiness, industry or consumers in the areas of quality requirements or higher standards. Moreover, small-scale producers, having a limited bargaining capacity, capture too small a share of the added value generated along the value chain. Finally, staple food producers typically suffer from inadequate public support and insufficient partnership with agroprocessors.

## 1.2 Study objectives

In this chapter, we explore the central question concerning the extent to which staple food value chains can be promoted through a different development model compared with the commodities models that prevailed in the past relating to export commodities. We do this for several reasons. First, understanding the policy processes and the institutional setting that led to the export commodity models can illuminate what a suitable staple food value chain model would look like in light of the distinction between staple and cash crops. Second, answering this question is critical for value chain policy design and for effective investment strategies, given the renewed interest in staple foods. In some countries, governments are attempting to reapply schemes used for traditional export commodity chains to staple crops. This may not be the optimal option as there may be different institutional and market structures at play that require alternative approaches. Other voices are calling for a return to the role of market controls and the re-activation of parastatal agencies, while still others call for hybrid models combining public and private roles in managing staple food value chains. However, there is an increasing view that gives a prominent role to the private sector to lead the way for the development of staple value chains. The role of producer organizations is also highlighted as central for the growth of inclusive value chains, given the dominance of small-scale producers – both men and women – and the need to aggregate farmers to acquire enough clout to become effective economic players in the market.

To undertake this comparative analysis, we take a historical perspective and divide commodity development models into three categories coinciding with three broad epochs in the recent history of West Africa: (1) the colonial period (up to 1960) and the post-colonial export-oriented period (1960 through 1980); (2) the post-structural adjustment period (1980-2000) where new impetus was given to privatization, the retreat of the state (and development partners) from agriculture and the emergence of non-traditional export foods; and (3) the post-2000 period (starting with the MDGs and the focus on poverty reduction) and the shifting interest towards staple food value chains. Table 1 summarizes the key periods for West Africa with respect to the prevailing commodity models.

**Table 2. Key epochs for West Africa relating to value chain development models**

Period	Prevailing commodity/ value chain model	Key commodities/Key players
<b>Colonial period (1920's to 1960)</b>	State supported, private-led value chains focusing on exportable raw commodities	Cocoa, cotton, coffee, peanuts  Parastatals; private value chain actors; European/ international consumers
<b>Post-independence (1960-1980)</b>	State-controlled (parastatals), integrated value chains for exportable raw commodities	Cocoa, cotton, coffee, peanuts  Parastatals
<b>Post-structural adjustment (1980-2000)</b>	State retreat from commodity chains, emergence of non-traditional export food products	Private-led value chains in selected high-value export food (horticulture)
<b>Post-MDG (2000-2007)</b>	New priorities for food import-substitution value chains (food security)	Transition period (liberalization of state-controlled commodities, selective rise of the agribusiness-led value chains)
<b>Post-food crisis (2007-now)</b>	New initiatives to support production and supply of staple food crops, alignment of new policies and investment strategies focusing on staple foods	Initiatives for rice, maize, cassava, multiple private and state-based players, new emphasis on public/private partnerships, stronger role for producers' organizations

**Source:** Authors

The objective of this chapter is to conduct a comparative analysis of three agricultural sector development models in West Africa, which coincide with three historical periods in the region. The three commodity models compared are:

1. Traditional export commodity model; state-controlled (coffee, cocoa, cotton, groundnuts).
2. Non-traditional value chain export model; private agribusiness-led (horticulture)
3. Staple food commodity model; multi-actor and multi-market model (cereals, roots and tubers, livestock).

The aim is to examine the key features of the first two export commodity models, compared with the third staple food domestic commodity model and draw the appropriate conclusions as to the key features of a commodity model suitable for staple foods. The approach is comparative, drawing from historical development models and noting lessons from their successes and their failures.

For policy analysis, the approach we take draws from institutional economics and focuses on policy processes, distinguishing between policy actions (instruments) and policy actors (institutions). We view sectoral policies and strategies as path-dependant, built over past experiences and very difficult to reverse unless the economy comes under unexpected and significant external shock. Examples include the oil crisis of 1973 and the world food price crisis of 2007/08.

In each of the export commodity cases examined, we follow a simple analytical framework, described in Table 3 and summarized below:

- Policy instruments (actions) are evaluated through the following performance indicators: (i) efficiency; (ii) impact of the instrument on targeted beneficiaries; and (iii) cost/sustainability of the action.
- Policy actors (institutions) that initiate and manage these instruments are examined on the basis of: (i) their objectives and aims; (ii) the resources mobilized to achieve them; (iii) the degree of harmonization among different instruments; (iv) the concordance or conflicts between the objectives of key players; and (v) the governance and the relative power or weakness of different players.



- The commodity cases examined are evaluated according to: (i) the improvement of productivity trends; (ii) the distribution of added value among the value chain actors, including farmers; and (iii) risk-management mechanisms for the commodity, subject to international conditions, etc.
- Also included is a review of other relevant internal or external factors, developments or shocks that contributed to the commodity's good performance, stagnation or decline.

**Table 3. Analytical framework for policy analysis of value chain models in West Africa**

Analytical framework for policy analysis of value chain models in West Africa		
	<b>ACTIONS</b> (Instruments/Measures)	<b>ACTORS</b> (Institutions)
<b>Policy actions and actors analyzed</b>	<ul style="list-style-type: none"> <li>• Subsidies (fertilizers; credit)</li> <li>• Taxes</li> <li>• Regulations (laws; licenses)</li> <li>• Price regulation/controls</li> </ul>	<ul style="list-style-type: none"> <li>• Ministries/specialised agencies</li> <li>• Parastatal (commodity) agencies</li> <li>• Agro-industry/ private actors</li> <li>• Producer groups; Cooperatives/PO</li> <li>• Professional organisations/NGO</li> </ul>
<b>Analysis of policy institutions and policy processes</b>	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Effect on target beneficiaries</li> <li>• Cost/benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Agency objectives (maximizing revenue; profit; market share)</li> <li>• Governance: power structure; bargaining capacity; shared information</li> <li>• Relationships between actors (coordination; harmonisation, conflict; mistrust)</li> <li>• Benefits and risk sharing across actors</li> </ul>
<b>Drivers of value chain performance and sustainability</b>	<p><i>INTERNAL</i></p> <ul style="list-style-type: none"> <li>• Indicators of long term productivity trends</li> <li>• Distribution of value added among the value chain actors</li> <li>• Risk management instruments and their effectiveness</li> </ul> <p><i>EXTERNAL</i></p> <ul style="list-style-type: none"> <li>• Technological developments</li> <li>• Changing food demand trends</li> <li>• Emergence of commodity substitutes</li> <li>• Changing competitiveness among competing suppliers</li> <li>• External shocks</li> </ul>	

Source: Authors

The above framework is applied for analysis of three export commodities (groundnuts, cocoa, cotton), two high-value export commodities (pineapple, banana) and two staple crops (cassava, maize). The commodity/country pairs examined are summarized in Table 4, along with selected features.

**Table 4. Commodities studied and their key characteristics**

	Commodity / country	Key actor(s)	Primary market	Degree of integration	Role of smallholders	Potential for growth
<b>Traditional export commodities</b>	Groundnuts (Senegal)	State; parastatals	Export and domestic	Integrated internally up to exports	Large number of smallholder producers;	Limited (strong competition from substitutes); degraded soils

Table 4. Commodities studied and their key characteristics (Cont.)

	Commodity / country	Key actor(s)	Primary market	Degree of integration	Role of small-holders	Potential for growth
Traditional export commodities	Cocoa (Côte d'Ivoire)	State; parastatals	Export (Europe)	Vertical integration with multinationals	Large; diverse size of farmers; tied to cocoa collection and initial processing	Limited growth; some recovery due to improved prices; but return is slow
	Cotton (Mali)	State; parastatals	Export (Europe)	Vertical integration up to exports	Numerous small-scale producers; closely linked with cotton buyers (inputs, prices)	Weak; prices; yields; and changing relative incentives are unlikely to see a significant return of cotton
Non-traditional high-value export commodities	Banana (Côte d'Ivoire)	Private; agro-industry	Export (international and regional)	Integration with Nordic retailers	Two segment market- small scale excluded from export opportunities	Medium growth; standards may be a limiting factor
	Pineapple (Ghana)	Private; agro-industry	Export (international and regional)	Integration with Nordic retailers	Two segment market- small scale excluded from export opportunities	Medium growth; standards may be a limiting factor
Staple food value chains	Cassava (Ghana)	Private; mostly small scale	Domestic; regional	Limited	Smallholders dominate the value chain, especially women	Huge potential for growth; food demand; industrial demand
	Maize (Burkina Faso)	Private; multiple actors	Domestic; regional; multi-market outlets	Limited	Smallholders dominate the value chain especially women	Huge potential for growth; food demand; industrial demand

Source: Authors

## 2. Traditional export commodity model: historical overview and case studies

### 2.1 Overview

#### Colonial legacy

During the colonial period in West Africa, great efforts were made to introduce new value chains deemed suitable for the agro-ecological conditions of the sub-region. The objective of the colonial administrations was to launch new agricultural sectors with great demand potential in the processing and consumption centres in Europe. The main crops introduced to the region were cocoa, coffee, cotton and groundnuts (palm oil is native to the region) (Blein *et al.*, 2008). The table below summarizes the dates of introduction of these crops in the region.

**Table 5. Dates of introduction of traditional cash crops in West Africa**

Crop	Date of introduction	A few examples
Coffee	1790-1930	Cape Verde - 1790: Arabica Liberia - 1875: Arabica – 1945: Robusta Côte d'Ivoire – End 19th Century – Beginning 20th Century Guinea - 1895: Arabica – 1910: Robusta Cameroon - 1913: Arabica – 1930: Robusta Togo - 1923: Robusta Benin - 1930: Robusta
Cocoa	1822-1920	São Tomé and Príncipe - 1822 Ghana - 1871 Côte d'Ivoire - 1890 Cameroon - 1920
Cotton	1820-1921	Attempts in Senegal - starting in 1820 Togo - 1900 1914: Niger Basin
Groundnut	Starting in 1830	Start of production in West Africa - 1830

**Sources:** ECOWAS-SWAC / OECD (2007a, b and c)

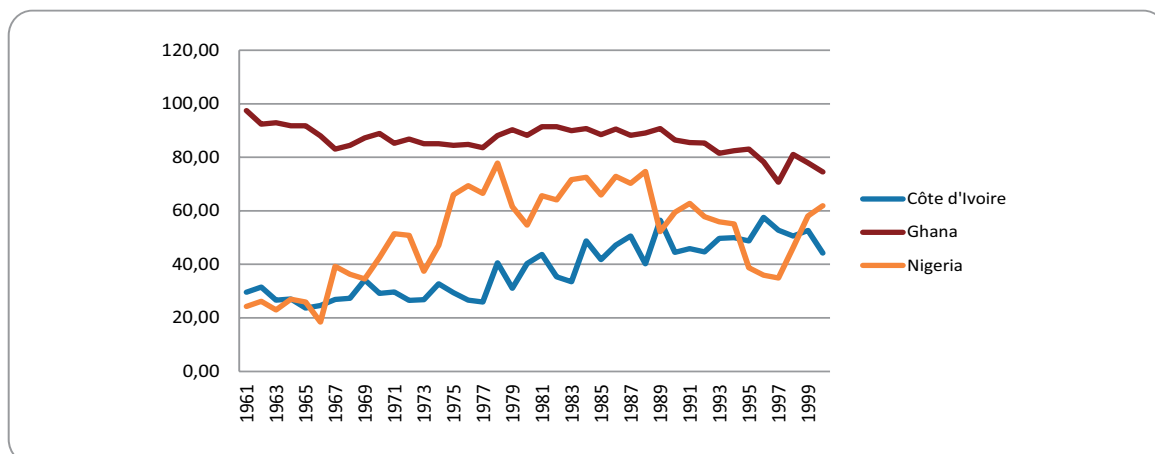
A set of state agencies and companies was established to lead and oversee these new value chains when these new crops were introduced. In the case of cotton, for example, France created the French Company for the Development of Textile Fibres (CFDT) to develop national value chains with the support of the Research Institute of Cotton and Exotic Textiles (IRCT).

### **Continuity after independence**

Once they gained independence, West African states maintained the same structures and management methods for these value chains while nationalizing some agencies. The newly independent states badly needed to appropriate these export revenues to meet their development needs (Akiyama *et al.*, 2001). Keeping the same priority for these already well-developed and structured export sectors, governments allowed national producers who had been excluded under the colonial administration to have access to these sectors. This strategy focused on exporting a few raw agricultural products while rendering the region's agriculture poorly diversified with a limited number of sectors representing a significant portion or even a majority of agricultural exports revenues in some countries (particularly coffee and cocoa between 1960 and 1990, groundnuts in the 1960s-1970s and cotton starting in the 1970s).

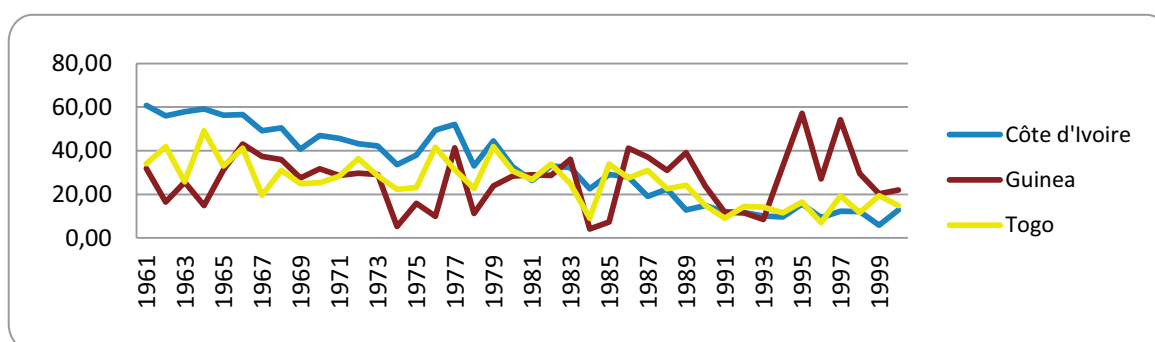
Indeed, as suggested in Figures 3 through 6 below, countries in West Africa strongly favoured some of these cultures. Thus, between 1960 and 2000, cocoa exports represented nearly, or even more than, half of agricultural exports from countries such as Côte d'Ivoire, Ghana and Nigeria. Coffee experienced a similar trend, representing between 30 percent and 60 percent of agricultural exports from major producing countries in the 1960s and early 1970s for Côte d'Ivoire, Guinea and Togo, although there has since been a decrease for Côte d'Ivoire and Togo. Groundnuts and cotton experienced opposite trajectories in terms of export share. While groundnut first strongly dominated agricultural exports for the two major producers – Nigeria and Senegal in the 1960s – it then experienced a strong downward trend, leading to a significant reduction of its share in the 1970s. In contrast, cotton crops evolved with a growing influence from the 1970s to rapidly become a real force in agricultural export countries such as Benin, Mali and Burkina Faso (with the exception of the period from 1995-1997).

Figure 3. Share of revenues from cocoa exports to total agricultural exports, 1961-2000



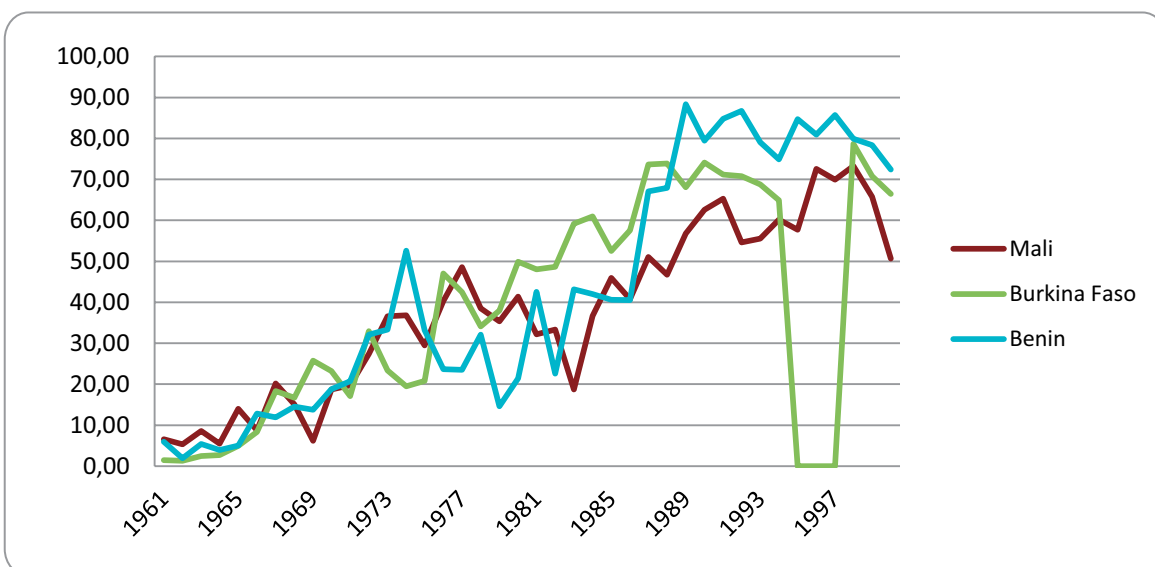
Source: FAOSTAT (2012)

Figure 4. Share of revenues from coffee exports to total agricultural exports, 1961-2000

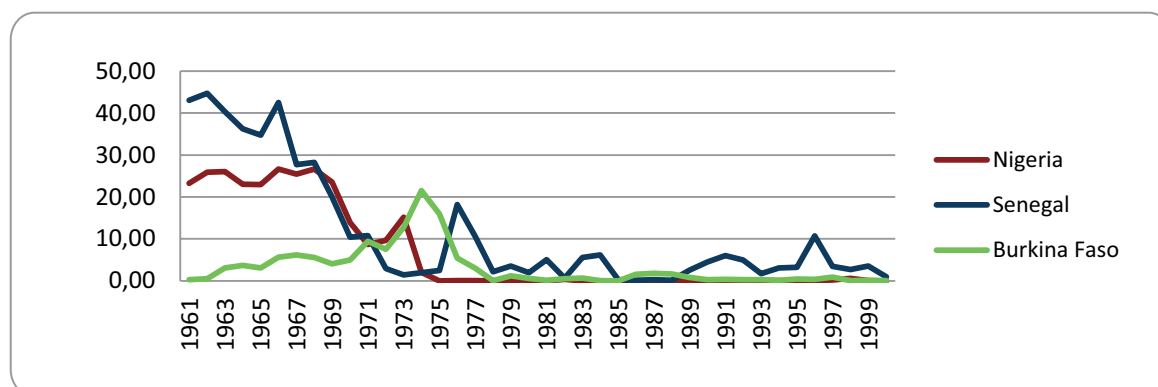


Source: FAOSTAT (2012)

Figure 5. Share of revenues from cotton exports to total agricultural exports, 1961-2000



Source: FAOSTAT (2012)

**Figure 6. Share of revenues from groundnut exports to total agricultural exports, 1961-2000**

Source: FAOSTAT (2012)

For a number of countries, economic development has been largely focused on these flagship cash crops, including groundnuts in Senegal, cocoa in Côte d'Ivoire and Ghana, cotton in Benin, Burkina Faso and Mali.

### ***Institutional set up***

These value chains were strongly supervised by the state through parastatals that intervened both upstream and downstream of production. This model was used, for example, in the cocoa sector in Côte d'Ivoire until 1999, with the Agricultural Products Price Support and Stabilization Board (CAISTAB) and for coffee and cocoa in Cameroon until 1994, with the National Cocoa and Coffee Board (ONCC) (Varangis and Schreiber, 2001). These agencies included government marketing boards that had the marketing monopoly, including for exports (Varangis and Schreiber, 2001). These state offices also controlled processing and determined price levels allocated to producers (Akiyama *et al.*, 2001; Akiyama, 2001; Varangis and Schreiber, 2001). In some countries, stabilization funds were established. According to Varangis and Schreiber (2001), these regulated the domestic and export markets, as well as producer prices. The emergence and consolidation of international agreements on some of these crops (International Coffee Organization, International Cocoa Organization) also justified the existence of these parastatals as they were in charge of controlling national quota exports and participating in negotiations – for example, for the coffee sector (Akiyama, 2001). These sectors were therefore also supervised internationally.

West African states have also relied on other types of organizations, such as development companies (e.g. the Society for the Development of Oil Palm (SODEPALM) in Côte d'Ivoire and the Sugar Company of Comoé (SOSUCO) in Burkina Faso) that were directly involved in production. Governments have also supported the establishment of state cooperatives that helped support small producers in each of these sectors. These cooperatives were also responsible for providing inputs and other services to producers. Above all, they responded to the public sector's will to have a contact partner in rural areas, as was the case in Senegal (Socodevi, 2008). Moreover, they could also weakly self-organize, given that governments have often sought to control producers by limiting the number of organizations and promoting their "champions" to obtain political support from rural populations (Murphy, 2010).

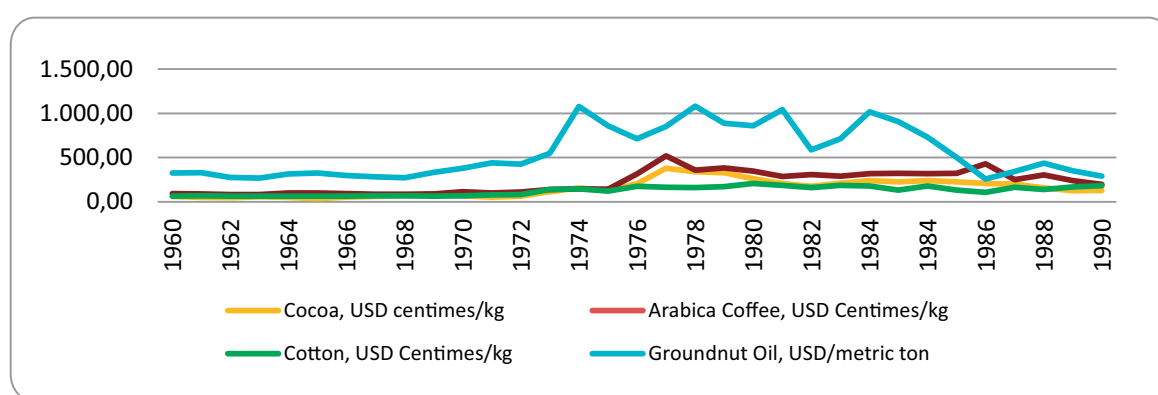
### ***The slow decline and demise of the export commodity model***

From the second half of the 1970s, the changing economic environment had a significant effect on the sustainability of this approach, particularly with the decline in international prices for these crops (Figure 7). After the 1973 oil crisis, soaring prices for other agricultural products increased revenue for these countries but also increased prices for energy and imported agricultural inputs (especially fertilizers). As a result of their increased income, these countries indebted themselves heavily, based on optimistic projections regarding

future export earnings. But the ensuing collapse of prices meant that these indebted countries have been unable to pay their debts, given their emaciated revenues.

Declining prices have also caused the collapse of international agreements on these products and goods, thus ending any international trade regulation for them. Countries in the region have therefore suffered a significant loss of income – agricultural and non-farm – which had been drawn primarily from these exports. They also gradually lost their market share in these sectors, starting in the 1980s, with the rise of other competing regions, such as Southeast Asia. In addition, it was during this period that the African continent, including West Africa, became a net food importer, largely because of the significant increase in population in the 1960s and increased consumption per capita (Rakotoarisoa *et al.*, 2011). The loss of export revenues has also made it difficult to finance these imports.

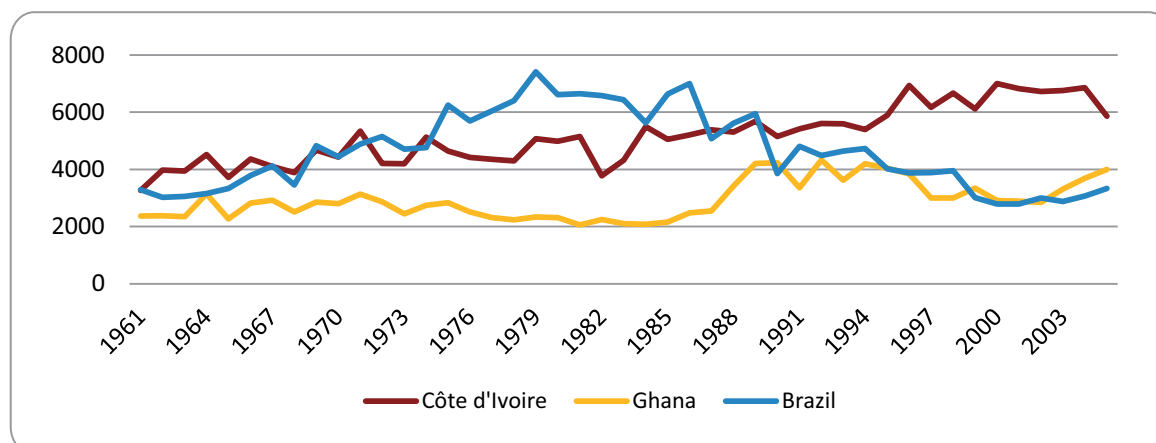
**Figure 7. Evolution of international commodity product prices (1960-1990)**



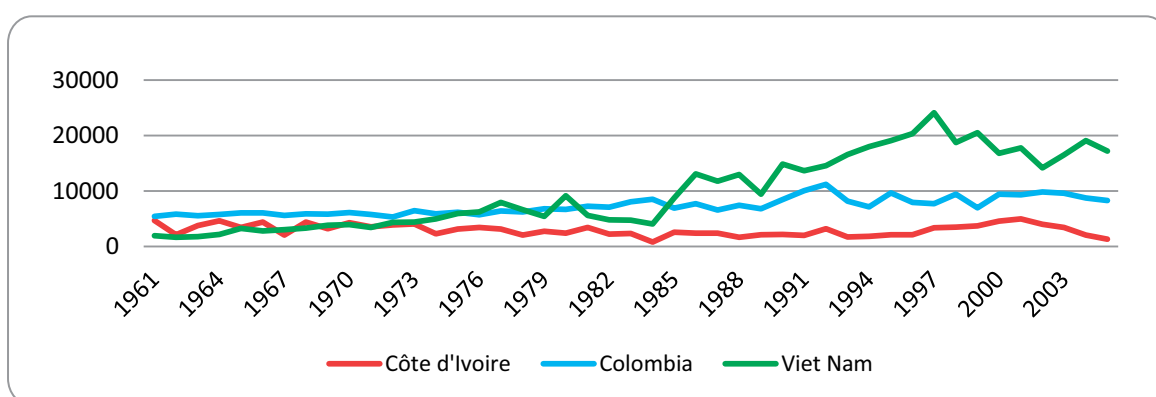
**Source:** World Bank Data (2012)

This new situation revealed and exacerbated the flaws of the institutional configuration in the export model strategy. Agriculture parastatals were faced with extremely low prices for the sectors concerned, making it more and more difficult to subsidize them, and therefore creating many fiscal deficits. At national level, the mismanagement of these organizations intensified the financial pressure, resulting in significant operating costs, red tape and rampant corruption (Murphy, 2010). This all led to a decline or even collapse of the quality of services provided by these agencies throughout the value chain. The drop in prices could not be compensated by productivity gains within each value chain, partly because parastatals had the monopoly, which resulted in a lack of incentive to be competitive. Moreover, although the state had previously reaped benefits through the control of these sectors, it reinvested very little in research and development,<sup>2</sup> meaning that yields achieved in these sectors evolved only slightly in the 1970s and 1980s (Figures 8, 9 and 10) and did not increase steadily, especially in comparison with other competing regions.

<sup>2</sup> Consumer spending has been preferred, especially to meet the needs of growing populations.

**Figure 8. Evolution of cocoa yields (Hg/Ha) for some major producing countries (1961-2005)**

Source: FAOSTAT (2012)

**Figure 9. Evolution of coffee yields (Hg/Ha) for some major producing countries (1961-2005)**

Source: FAOSTAT (2012)

The fact that public officials predominate in these sectors has weakened other actors who could potentially be involved along these value chains, impeding them from fully participating; this includes producers' organizations and associations and other private actors, such as traders at all levels, specialized companies and product processing units, which are often dependent on the issue of licenses by public authorities and confined to a minor role in the national market. The weakening of these actors has somehow deprived the system from finding alternatives to cope with its difficulties and has mainly favoured the sector losing competitiveness and productivity.

Given the difficulties faced in these value chains and the reversal of the dominant economic paradigm, donors and international development organizations have begun to promote deregulation and the state's gradual withdrawal by implementing Structural Adjustment Programmes (SAPs). These sought to revive economies in developing and least-developed countries by restructuring the different sectors through liberalization. In parallel, intergovernmental groups (IGG) were focused on strengthening markets that became the cornerstone of the agricultural sector's development in the new dominant paradigm. Liberalization was quickly placed at the centre of aid conditionality and was carried out in West Africa through a long process. Table 6 below provides an overview of the progress over time of the liberalization phase and the gradual end of the value chain supervision.

**Table 6. The liberalization process for a few basic agricultural sectors in West Africa**

Country	Agricultural sector	End of liberalization process
Nigeria	Cocoa	1986
Niger	Groundnut	1988
Cameroon	Coffee-Cocoa	1994
Ghana	Cocoa	1995
Ghana	Cotton	1995
Burkina Faso	Cotton	1996
Togo	General	1996
Côte d'Ivoire	Cocoa	1999
Benin	Cotton	2000
Côte d'Ivoire	Cotton	2004
Senegal	Groundnut	2004
Mali	Cotton	Ongoing

**Source:** compiled by authors

In fact, as shown in Table 6, while SAPs were promoted from the early 1980s, liberalization took much longer, proceeded piecemeal, and reached varying degrees of completion. The reasons for this are numerous. First, the high degree of government dependence on the cash crop revenues made it difficult to withdraw state control; additional factors were lack of viable alternatives and lack of a private sector ready to take over, as well as weak producer organizations, having found it difficult to manage some of the previously state-run services effectively. However, the mounting and unsustainable indebtedness of the parastatals and the serious macro-economic imbalances that resulted made it difficult for the government to resist or to reverse course.

## 2.2 Case studies

### A. The groundnut value chain in Senegal: slow decline of a state-controlled sector

From the beginning, the colonial administration supported the development of the groundnut sector in Senegal by building infrastructure to transport crops, starting in the early 1920s, and by setting up development agencies and research centres to support producers (Freud, 1997). In 1936, eight companies were active in the groundnut value chain (Freud, 1997). Following its independence, the Senegalese economy continued to support the groundnut sector, particularly export production, which accounted for 80 percent of exports (Brüntrup *et al.*, 2008).

The Senegalese government strongly managed the sector through many successive parastatals over the years (Brüntrup *et al.*, 2008; Ndiaye, 2008). Since 1966, the National Office of Marketing and Development Assistance (ONCAD) has been the cornerstone of the groundnut policy in Senegal. Indeed, it annually fixed the producer price (Ndiaye, 2008) and was responsible for supplying inputs and seeds, modernizing equipment and transportation, marketing the production, and especially supervising

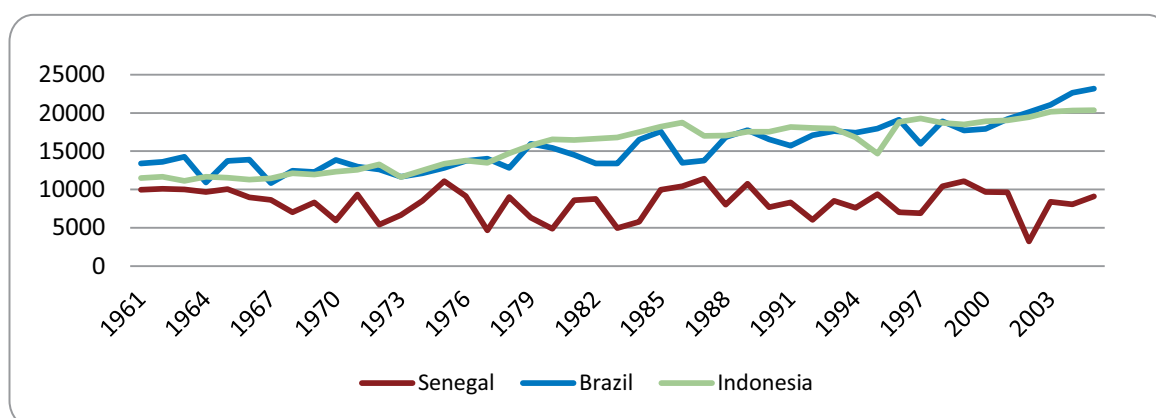


cooperatives that were created mostly through the government that marketed their crops (Freud, 1997). The Senegalese company for the commercialisation of agricultural machinery (SISCOMA), created in 1963, aggregated all groundnut production that transited for further processing, thus benefiting from a strong monopoly position. The value chain was even more tightly controlled given that the Senegalese government supported and managed the main producer associations and organizations, especially in the 1970s. Nationalizing oil mills gave rise to the National Seed Marketing Company (SONACOS), in charge of marketing groundnut oil, with a monopoly over production exports. Agricultural extension strategies were also developed through SODEVA (Society for Development and Agricultural Extension), which replaced the French SATEC (Society of Technical Assistance and Cooperation) that had ensured agricultural extension in the sector from 1964 to 1968.

France continued to subsidize the groundnut sector in Senegal, in part because of the strong presence of the French company Lesieur, which enjoyed a local monopoly on vegetable oil markets. However, from the 1980s, the industry was faced with increasing difficulties, in part because the new management was burdened by bureaucratic weight, as well as weak technical capacity and expertise, leading to poor decision-making and resulting in decreased performance.

These difficulties gradually led to liberalizing the sector. In 1979, the ONCAD was eliminated to reduce debt linked to administrative constraints. In 1985, the state ceased to support access to credit for farmers, who were then forced to contend with higher market interest rates and more stringent conditions. This was followed by a slow erosion of yields (see Figure 10). From the 1990s onwards, the sector has faced a real crisis, as a result of gradually declining competitiveness due to the rise of alternative oilseed oil products in the global market (palm oil, cottonseed, rapeseed, sesame), which caused groundnut market share erosion and falling export prices. The scheme's excess profits were not reinvested enough in research or infrastructure to maintain the sector's competitiveness. After keeping it alive through subsidies for several years, despite a constant decline, France finally withdrew its support.

**Figure 10. Evolution of groundnut yields (Hg Ha) for some major producing countries (1961-2005)**



**Source:** FAOSTAT (2012)

The state's withdrawal had disastrous consequences for all areas in the country where groundnut was the main crop, with rural poverty worsening. The state also pulled out of the value chain's upstream sector by reducing its agricultural extension services (SODEVA was abolished in 1998) and ceasing to support supplying farmers with inputs. Finally, in 2004, the state's disengagement process was completed with liberalization of SONAGRAINES, along with the state selling most of its shares. The only exception is the 120 XOF (African Financial Community francs) so-called "backup price" maintained by the state, which is considered far too low by producers (Brüntrup *et al.*, 2008). Despite the state maintaining a subsidized price, liberalizing the

groundnut sector has had a negative impact on the value chain; the private sector has had no incentive to invest in a market losing competitiveness with other products and this has resulted in an institutional vacuum in Senegal's first export sector.

This has significantly and negatively affected incomes of groundnut producers, greatly impoverishing them, dragging down rural economies and increasing widespread poverty. Worse, many farmers were not able to replace groundnut with other more profitable crops since in many cases the sandy soils (better adapted to groundnut) were so depleted that they could not easily support other crops. Many producers have therefore been forced to continue to grow groundnuts despite lower returns.

The tragic outcome of the groundnut sector in Senegal clearly illustrates the weakness of making the agricultural sector as a whole dependent on a single lead crop that may have boomed in the past but has no real long-term sustainability. The groundnut sector was strictly controlled and managed for a long time, through the efforts of the various Senegalese parastatals or through grants by the French government. This allowed it temporarily to maintain a dynamic value chain but the state structure could not hold fast against a progressively unfavourable international economic situation and the rise in the world market of more profitable and competitive substitute products (such as sesame or rapeseed). When Senegal was forced to liberalize groundnut production at the same time that France withdrew its financial support, the sector's collapse led whole parts of the economy and small producers involved in the value chain into precarious conditions because the private sector has neither invested nor truly become involved.

In summary, the case of groundnuts in Senegal is a classic example of a sector inefficiently run by the state, without the inclusion of sufficient safeguards to ensure continued productivity increases and long-run sustainability. The state controlled the entire value chain, reaping much of the value added as long as world prices were sufficiently higher than the price floors guaranteed to farmers. Private agroprocessors (including the monopoly-holding company, Lesieur) also enjoyed a near monopoly on the vegetable oil market, depriving the sector of the healthy competition that would have ensured continued investment in productivity-enhancing technologies and strengthened competitiveness. Producers of groundnuts, despite their organization into cooperatives, were the weakest link in the chain. The government agencies merely used the cooperatives to supply the needed inputs and to collect the raw product for later marketing and processing. Farmers had little bargaining power to influence prices, ensure upgraded technologies or extract a greater share of value addition. Over time, the sector saw its competitiveness diminished by both the increasing loss of soil fertility through continued cropping and the rise of substitutes in the world oilseed market. These factors, along with inefficient management of parastatals, progressively combined to erode global demand for groundnuts and groundnut oil and depress its prices. Eventually, the parastatals started operating at a loss, which could only be remedied through a temporary infusion of subsidies, without an accompanying strategy to redress the loss of competitiveness. The lack of private sector enthusiasm for investing in a value chain already in decline hastened the final collapse of the state-controlled model for the groundnut value chain.

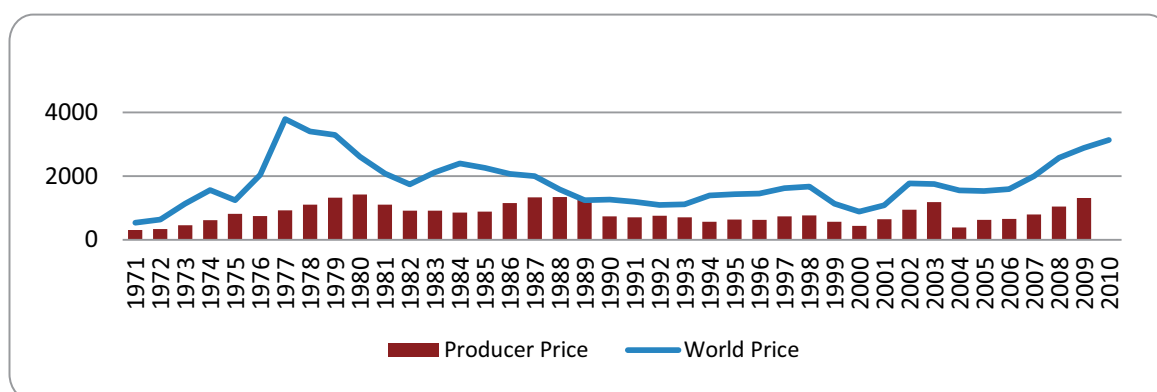
## **B. The cocoa value chain in Côte d'Ivoire: a failed case of cooperatives control**

Like groundnuts in Senegal, cocoa was supported in Côte d'Ivoire by the French colonial authorities, although to a lesser degree and at a later date. In Côte d'Ivoire, the interest in growing cocoa began in 1912, and was based on a colonial-style production (ECOWAS-Sahel and West Africa Club/ OECD, 2007). To support cocoa production, the colonial administration also established a research centre, as well as a price system that excluded domestic producers from the sector until its abolition in 1944 (ECOWAS-SWAC / OECD, 2007). In 1955, the colonial authorities set up a stabilization fund that was maintained after independence in 1960, and taken up by President Houphouët-Boigny. Indeed, since

independence, the government of Côte d'Ivoire has sought to control national cocoa production, given the large share it has held on the world market (FAOSTAT, 2012). From the 1960s onwards, the first management model in Côte d'Ivoire relied heavily on CAISTAB (a stabilization fund), which comprised a wide range of powers, including establishing fixed prices throughout the value chain, thereby affecting the incomes of all the actors involved by fixing allowed costs and margins (Varangis and Schreiber, 2001). CAISTAB also monopolized the marketing and export of cocoa.

Indeed, any exports by individual operators had to receive CAISTAB's approval. Private operators, producers or producer organizations/cooperatives could sell cocoa in the internal market but were still under the control of CAISTAB, which defined each actor's margins, or flattened transport prices through a system of subsidies and repayment by traders who provided the transport (Varangis and Schreiber, 2001). CAISTAB was also responsible for product quality. It also controlled prices given to farmers, guaranteeing them a minimum income. These prices also mitigated changes in international prices through selling in futures markets (selling and buying to be executed in future transactions with pre-agreed prices); this provided some price stabilization throughout the year. In this system, producers and their organizations lacked resources compared with this monopoly and therefore could not influence it as they were dependent on it. Private operators were mostly French intermediaries who "specialized in trading" and profited from import-export operations.

**Figure 11. Producer prices compared to world prices in the cocoa sector in Côte d'Ivoire (USD per tonne), 1971-2009**

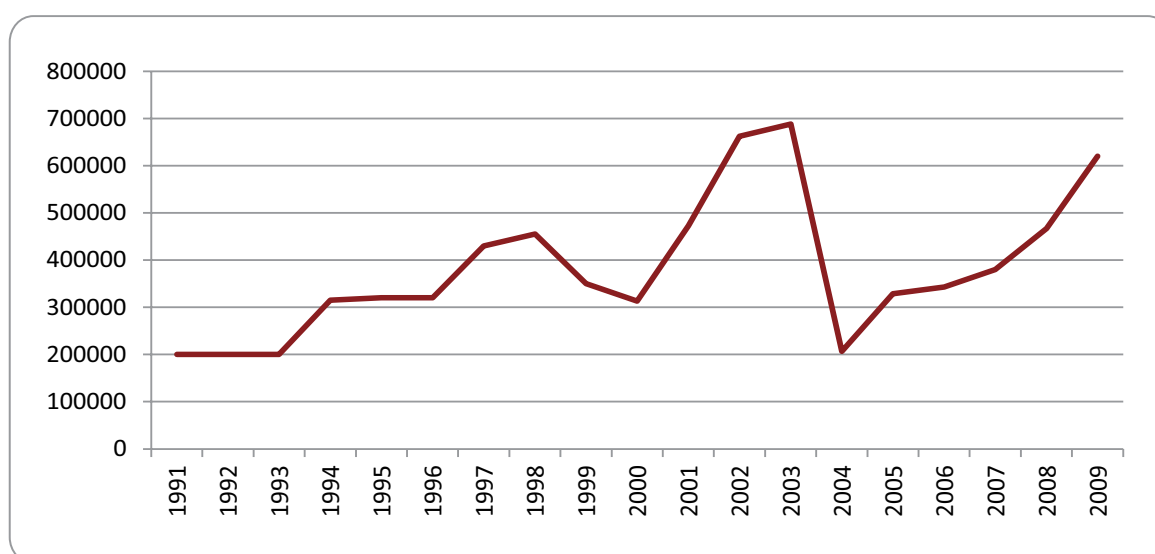


**Source:** FAOSTAT (2012) and International Cocoa Organization (2012)

With the state's monopolization of the sector (through CAISTAB), risks were pushed upstream and absorbed by producers, while benefits were largely absorbed by the state in the form of substantial revenues related to indirect production taxation and also by intermediaries who shared sales and export margins. CAISTAB also faced financial difficulties for various reasons. The administrative and organizational operations proved ineffective and poorly suited to manage price risks, which had serious consequences when cocoa prices fell. Indeed, in 1988, a significant drop in cocoa prices led to the collapse of the International Cocoa Organization's international stock system and to strong budgetary pressures for CAISTAB. According to Varangis and Schreiber (2001), until 1986, CAISTAB could accommodate price changes simply by adjusting prices offered to producers. But the price drop below USD 3.00 per kilogram, mainly due to failure of the international agreement on prices, led to serious difficulties for producing countries such as Côte d'Ivoire and agencies such as CAISTAB, which resulted in a drop by half in real output prices (1989/90). The financial crisis in the sector had made its circumstances unsustainable.

Liberalization and privatization of the sector had become inevitable. In 1996, domestic prices previously fixed by CAISTAB were partially removed,<sup>3</sup> while CAISTAB's marketing of cocoa was limited to 15 percent of annual production, thus leaving room for private operators. Finally, its expenditure and budget were scaled down. Three years later, in 1999, faced with the limitations of these partial reforms, the government invited private operators to be part of CAISTAB's organigram, while fixing and price regulation were abandoned. Although this liberalization allowed for greater participation of private actors, the effect on producers was generally negative because they became exposed to more pronounced price volatility. Indeed, although producer prices rose immediately after liberalization, they fell in the years immediately following (as shown in Figure 12 below).

**Figure 12. Evolution of producer prices (FCFA per tonne) in the cocoa sector in Côte d'Ivoire (1991-2009)**



**Source:** FAOSTAT (2012)

For small farmers who depend on these crops for their income, negative effects of falling prices (such as in 2004) can have much longer-term harmful consequences than the benefits gained by temporal price increases (such as those of 2002 and 2003). One of the criteria for long-term viability of these export sectors is based on an effective system of price stabilization.

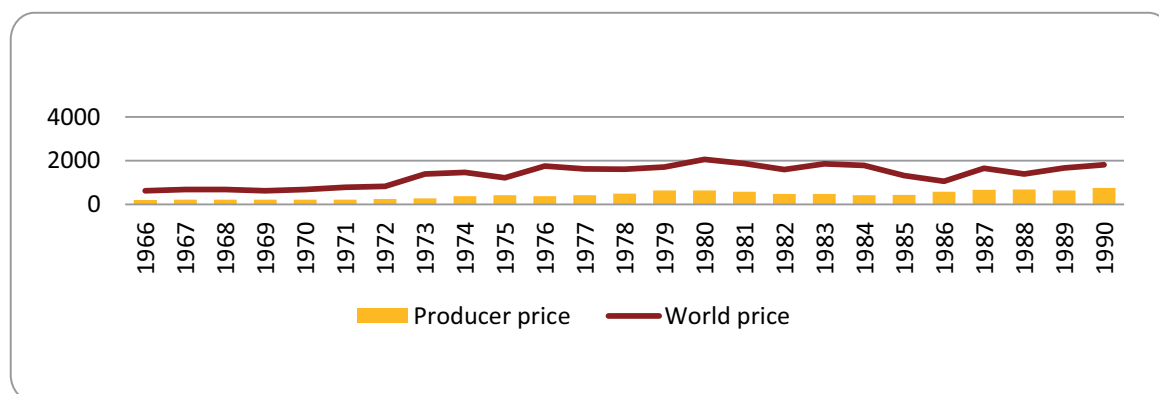
In summary, this is a clear example of a value chain controlled by a single parastatal whose singular objective was to extract maximum rents and revenues, without investing back into the value chain to ensure sustainability and long-run viability, especially given that the commodity is produced and sold as raw fruit to a global market that is increasingly competitive and therefore subject to high price variability. The value chain was also run with little consideration for including small-scale producers who absorb a higher share of risk compared with parastatals and private actors downstream. Moreover, there were no attempts to break the monopolies of multinationals and initiate local processing opportunities or to introduce market-based risk management instruments. All this condemned the system to become less viable over the long run. This is also a clear example of how not to have a value chain that is linked to multinationals and subject to their market controls but run entirely by a parastatal (in this case CAISTAB), controlling everything from price regulation to pre-setting each actor's margin and profits. Such a system proved to be unstable and incapable of withstanding and surviving such huge swings in world prices as have happened in the past.

<sup>3</sup> In 1996 they were only removed from group purchasing centres for cocoa beans and from transport costs.

### C. The cotton value chain in Mali: A weakened sector, too important to privatise

France's interest in cotton in Mali started in 1921 when the first infrastructures were built that eventually led to creation of the IRCT (1946) and the CFDT (1949). The latter was given the mandate of providing a stabilization fund that guaranteed prices to producers. After independence, the Malian government maintained the CFDT to regulate the sector (Tefft, 2004). Its strategy was based on intensifying production by developing quality fertilizer and providing it to producers, as well as promoting animal traction and facilitating purchase loans (Tefft, 2004). This highly-regulated production intensification strategy was successful for several years with a significant improvement in yields. The CFDT administratively fixed prices and protected producers against the volatility of international prices. Between 1960 and 1972, cotton producers were paid, on average, 30 percent of world prices. The CFDT also exercised a monopoly in collecting, ginning and marketing of cotton and ensured the export of cotton production.

**Figure 13. Producer prices compared with world prices for cotton (fibre) in Mali (USD per tonne) 1966-1990**



**Source:** FAOSTAT (2012) and World Bank Data (2012)

Once the contract between the French CFDT and the government of Mali expired, the latter partially nationalized the sector by creating the Malian Company for Textile Development (CMDT)<sup>4</sup> and controlled exports through the Malian Import and Export Company (SOMIEX). In this way the government sought to strengthen its control over this export crop of prime importance that generated nearly USD 33 million in 1974 and roughly USD 96 million in 1985 for the state (with a tripling of income in ten years, FAOSTAT, 2012). The role of the CMDT has been expanded compared to that of the CFDT, by supplying new services such as agricultural training (in maize production and metalwork), equipment supply, construction and maintenance of rural roads, health infrastructures and drinking water, and agricultural research (Tefft, 2004; Tefft, 2010). This is in addition to its traditional role, namely providing services directly related to cotton production and maintaining the system of setting producer prices, input supply and access to credit.<sup>5</sup>

Over 30 percent of rural households in Mali produce cotton. Given the importance of cotton in Mali's rural economy, it was customary for cotton producers to organize themselves to better serve their interests and influence the state-dominated management of the sector. Many village associations were formed in Mali from 1974 on, when the CMDT was created; by 1987, the number of these associations

<sup>4</sup>The CFDT maintained 40 percent of shares in the new national carrier, which facilitated continued technical and financial collaboration between the CFDT and the French government (Tefft, 2004).

<sup>5</sup>Credit was managed by the Société de Crédit Agricole et Equipement Rural (SCAER) until 1980 (Ministry of Agriculture of Mali, 2011) before the National Bank for Agricultural Development (BNDA) took over to address the various management problems faced by SCAER (Tefft, 2004).

had risen to 950 (Tefft, 2004). The CMDT, realizing it could not block them, decided to involve them as local relays to reach cotton farmers, providing services, inputs and necessary credit and receiving in return the collected cotton production (Bonnassieux, 2002; Tefft, 2004).

The period under the aegis of CMDT has been characterized by low production profitability (compared with the CFDT). This may indicate that the new management under CMDT did not include technically and managerially qualified officers as did the previous structure under French administration. The many shortcomings of CMDT have been revealed as well, such as excessive costs, poor resource management, duplication of responsibilities and a lack of cost control (Tefft, 2010). Moreover, the international price situation was not favourable. Thus, between 1974 and the mid-1980s, the CMDT lost about XOF 130/kg of cotton fibre (Tefft, 2004). Under these conditions, maintaining subsidized prices became more difficult and several times (in 1985, 1992, 1995 and 1999), the CMDT had to provide producers with prices that were lower than world prices.

Given these difficulties, the institutional changes in the sector have led to an increased – albeit still limited – role for private actors. The CMDT is now a mixed public/private structure (60 percent controlled by the Malian government and 40 percent by private French actors). At the producer level, village associations are better developed and grouped under a single union (Union of Cotton and Food Producers, SYCOV). However, their room for manoeuvre to influence the sector management has remained very limited, while the international cotton trade situation tended to gradually worsen. The devaluation of the XOF in 1994 allowed some recovery in producer prices for a period of time; however, in the early 2000s, cotton prices fell<sup>6</sup>, causing a real crisis for the value chain and the CMDT.

Faced with these difficulties, the sector's management is not strong enough. This is reflected, for example, in difficulties providing inputs of adequate quantity and quality, as well as in their price increase. Similarly, the quality control by some of the responsible organizations has also declined, which has led to deterioration of the production quality. Ultimately, neither the village associations nor their union were strong or credible enough to mount an effective bargaining campaign on behalf of cotton producers. Moreover, they had little bargaining power vis-a-vis ginners, as cotton producers had fewer alternatives (given the long-standing state neglect for food crops, which had stagnated under very low yields and undeveloped marketing channels; see Chapter 15 regarding the case of sorghum and millet). As a result, cotton production declined sharply in 2004 as many farmers began turning away from this crop. Since then, the country has lacked the ability to forge a new and viable long-term strategy for this sector on which a large number of Malian households continue to depend, fostering an endemic structural crisis. As the value chain's liberalization is still not complete, the CMDT continues to be in charge of some of the traditional management functions.

In summary, the cotton value chain in Mali has gone through a long series of episodes of state control, first by the French (CFDT) and then by the Malian government (CMDT). The value chain was tightly controlled and vertically integrated and for a period yielded positive results, especially when yields were improving and world demand was strong. However, over time, both internal and external factors combined to undermine the long-term viability of this strategic sector. Poor management and poor decisions by the CMDT, combined with falling world prices (due to subsidies in richer countries, the rise of fibre substitutes and productivity improvements by competitive suppliers such as China and Brazil) offered a bleak prospect for this sector for all the major producers in West Africa. Because cotton producers did not have any economic or bargaining leverage (despite being organized as village groups or unions) the state could dictate the prices they received, which were just above the "walk-away price"<sup>7</sup> but no higher; the average price received was way below the world market price (Figure 13). Under the steady decline of world prices, the state itself started losing money, and eventually pushing the whole sector into a state of crisis. But a simple and clean-cut

<sup>6</sup> In 2001 the price of cotton fell by 42 percent (Tefft, 2004).

<sup>7</sup> Price below which farmers will have no incentives to grow cotton.

total liberalization of the system proved too difficult to withstand; hence, there was a protracted period of half measures and attempts at partial liberation measures. Meanwhile, many cotton producers began reducing cotton acreage, turning to alternative crops (rice, sesame, maize, etc.).

#### **D. Lessons learned from these case studies**

The export commodity model illustrated by the three cases just analysed has a number of common features. It is state-run (usually led by a parastatal that intervenes across the value chain) and the private players (agroprocessors and farmers) have relatively little bargaining power whether they are organized (as in groundnuts and cotton) or not (as in cocoa).

Initially, export commodity producers were benefiting, as yields improved through investments in research and provision of inputs, and as long as world prices were much higher than received prices, even accounting for variability (see Figure 11 for cocoa and Figure 13 for cotton). For example, cocoa farmers in Côte d'Ivoire "rarely received more than 50 percent of the export price" (Varangis and Schreiber, 2001). Also, as long as world prices fluctuated above the floor (received) price, farmers could count on this price stability and continue to engage with these commodities, especially as the alternatives (food or cash crops) offered less revenue. However, over time, the parastatals reduced the fixed producer prices (from their stable position in the 1980s) as world prices kept falling, sometimes by half, as in the case of cocoa in Côte d'Ivoire. Losses to income were simply passed on to farmers.

Apart from the basic processing activities off the farmgate (ginning for cotton, or roasting for cocoa), most of the private actors were intermediary marketers and traders who had established business relations with European importers. These intermediary actors ensured profit margins for themselves and thus were less vulnerable to price fluctuations. This was not the case for producers, who not only had to face declining price factors over time but had to contend with rising input prices, further squeezing their margins and revenues. Therefore, under this value chain model, producers absorbed much of the risk.

In all three cases analysed, producers have been the big losers when commodity markets were in crisis. This is partly the consequence of the monopolistic structure of the export commodity model, as well as the lack of attractive alternative enterprises for producers. Another important finding was that even when producer organizations existed (groundnut cooperatives in Senegal, cotton farmer groups in Mali) they were largely ineffective in leveraging their organizational power and therefore could be easily controlled by the state agencies. This suggests a serious organizational weakness in these producer organizations and a need to establish different forms of governance and structure, suitable for economic and market-oriented approaches. All this requires a serious look at how these organizations should be structured and governed, and how their internal capacity can be enhanced in order to become credible economic partners fully capable of engaging with the market (see Chapter 7 for a full treatment on this subject and the methodology proposed to create such market-oriented organizations).

The governance structure of the export commodity model was skewed in such a way that too little of the income extracted from the value chains (captured disproportionately by the parastatals and, to a lesser extent, the intermediate marketers) could find its way back as investment for improving farm-level productivity, maintaining competitiveness of the value chain and introducing risk mitigation measures (such as insurance) to strengthen farmers' resilience against risks and uncertainty and thus ensure sustainability.

When these internal factors were combined with external trends (long-term price declines, rising competition, emergence of substitutes, etc.), returns from these export commodities dwindled, putting

all the players into a precarious situation that eventually led to the collapse of these value chains and failure of the state-controlled export commodity model.

Liberalization of these sectors was not a panacea. Farmers who continued with these export commodities (though with lower acreage) had to deal with increased production and transport costs while facing more difficulties in accessing inputs and credit (Murphy, 2010), not to mention greater exposure to price variability with the removal of minimum price floors. Liberalization has exposed farmers to increased variations in world prices with no improvement of average received prices<sup>8</sup>. These losses have more than offset financial gains acquired through tax abolition. In fact, these cash crop production systems were destabilized enough to result in a serious demise of the state-controlled value chain model.

### 3. High-value private-led export commodity model

#### 3.1 Context and significance

The continued erosion of competitiveness of traditional export commodities through the 1980s and 1990s, and the liberalization that followed, opened the door for growth and investments in a number of non-traditional, high-value export commodities in many West African countries, notably in horticulture and floriculture. Swinnen *et al.* (2009) calculated an agricultural growth index and showed that, a decade following the reforms, traditional export commodities grew only by about 35 percent, compared with 50 percent for non-traditional, high-value exports and 60 percent for staple food sectors.

In some African countries, private agribusinesses managed to integrate the rapidly transforming global food system, producing and exporting niche products from horticulture and floriculture. During the 1980s, the global food system experienced significant structural changes as a result of rising demand, changing food preferences, growth of supermarkets and technological advances that facilitated long-distance trade of perishable products within shorter periods (Takane, 2004; Murphy, 2010). Demand for fresh fruits and vegetables has risen strongly in high-income countries, such as in Europe (Singh, 2002), creating new export opportunities for African producers for a variety of high-value products. These developments have greatly facilitated long-distance trade and opened new opportunities for new value chains to develop or expand, including from West Africa with its comparative advantages (low cost of production and labour) and the possibility to produce off-season. Moreover, African producers and exporters have been able to exploit the links that already existed, with European buyers allowing for easier market penetration in some cases.

Unlike the traditional export commodities, these high-value export products were largely driven and run by private actors and agribusinesses, while the state played only an indirect role. The high-value chain commodities are organized according to vertically-coordinated supply chains, dominated by a very small number of agrifood multinationals. The value chain leader is the retailer at the downstream end of the value chain, who dictates the terms of trade, sets the product quality specifications, and imposes standards and other conditions demanded from suppliers (such as EurepGap). Producers and suppliers at the upstream end could either comply or be left out of the market altogether. This meant that farmers and agribusinesses had to have a large enough size, capacity and capitalization to withstand the costs of compliance and to make the investments necessary to capture market shares.

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<sup>8</sup> Delpuech *et al.* (2010), show that the actual price of cotton production in West Africa's three major cotton producing countries (Benin, Burkina Faso and Mali) has not really increased with liberalization.



On the plus side, these non-traditional export commodities offered new scope for diversification with strong returns on investments and with added local employment benefits. For example, 10 000 people worked in the banana sector in Cameroon in 2003, 35 000 people in the banana and pineapple sectors in Côte d'Ivoire in 2002, and 12 000 people were employed in the string bean sector in Senegal in 2005 (Maertens *et al.*, 2009). On the downside, these non-traditional export value chains had limited impact on agricultural development and did not offer an alternative of comparable size to the common traditional exports, which were still far more significant for the national economy.

**Table 7. Employment in exporting horticultural sectors in Cameroon, Côte d'Ivoire and Senegal**

Country	Production	Year of survey	Number of employees in the sector
Cameroon	Banana	2003	10 000
Côte d'Ivoire	Banana and Pineapple	2002	35 000
Senegal	String Beans	2005	12 000
	Cherry tomatoes	2006	3 000

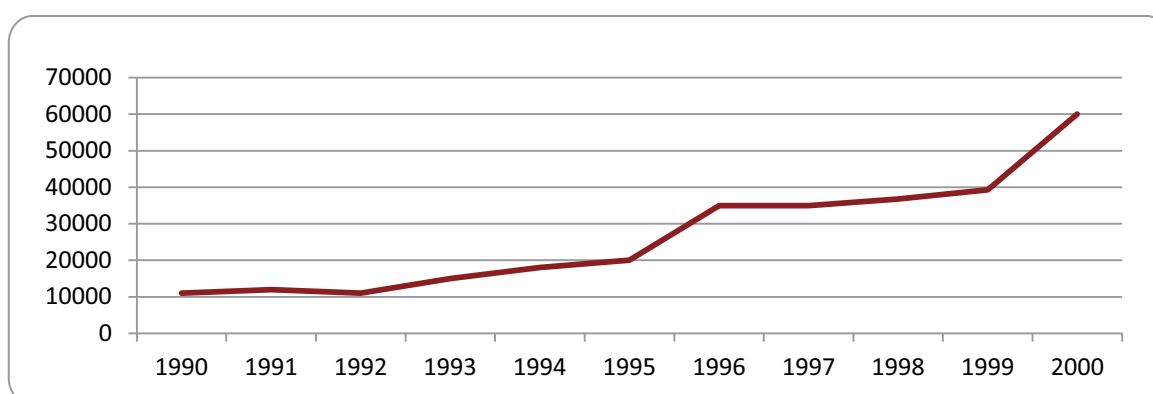
**Source:** Source: Maertens *et al.* (2009)

## 3.2 Case studies

### A. The pineapple value chain in Ghana: Strong potential but not for smallholders

Pineapple is one of the leading horticultural export crops in Ghana (Danielou and Ravry, 2005). Pineapple exports doubled from 1997 to 2004, reaching 70 000 tonnes sold for a value of USD 22 million, making it the number one export in value (Danielou and Ravry, 2005) (Figure 14). Ghana quickly built a competitive advantage over other suppliers by using a reliable national airline system, a reliable harbour and lower production costs (Danielou and Ravry, 2005). The pineapple value chain is essentially run by the private sector, dominated by medium to large-size farms upstream, and by export companies supplying European supermarkets. Farms producing pineapple rely on their strong capacity to meet the required standards and to adjust to changes in demand requirements by European buyers.

**Figure 14. Evolution of pineapple production (tonnes) in Ghana, 1990-2000**



**Source:** FAOSTAT (2012)

Smallholder farmers also produce pineapple in Ghana, as this product is accessible and labour-intensive (Takane, 2004). However, smallholders are excluded from the pineapple export value chain because they are unable to meet the stringent standards and specific quality specifications of European retailers. Among these is the requirement to buy only the Smooth Cayenne pineapple variety. Small producers were not able to switch easily from existing varieties, due to the expense and investment required, and were thus excluded from European markets. As small farmers lost export market share because of the change of variety demanded by buyers, their incomes fell.

The sector is segmented: medium and large farms dominate export production and small farmers produce pineapple for the local market, with smaller income prospects. Thus the stringent standards serve as a real barrier for smallholders who would otherwise have the capacity to produce and supply these exportable commodities, as they have no difficulty acquiring productive capital or obtaining credit for inputs (Ravry and Danielou, 2005).

In summary, the case of the pineapple in Ghana is an example of a value chain focused on an export market led by multinational food retailers whose primary objective is to meet high-income consumer demands for diversified, high-quality food products. The effect on the producers upstream is to favour large-scale and well-capitalized producers who are able to make a successful entry into the market. Small farmers who have the capacity to produce and supply are handicapped by their inability to meet the compliance costs. Thus the value chain, to the extent that it offers significant scope for growth and expansion, needs a policy framework that will not only enable sustained competitiveness but also enhance smallholders' capacity to participate in the value chains. This could be accomplished by expanding market outlets and providing incentives for value addition to the products serving domestic or regional markets, thus contributing to more inclusive value chain development. Clearly the impressive growth of the export volume (and value) for pineapple from Ghana points to a real competitive advantage; however, the exclusion of smallholder producers with highlights a gap that needs to be corrected in the context of an agricultural growth strategy based on a wide diversification of inclusive value chains.

## **B. The banana sector in Côte d'Ivoire: Liberalization improves competitiveness but marginalizes smallholders**

In Côte d'Ivoire, production of bananas is combined with mango and pineapple to form the so-called "fruit" value chain, which represents the second largest source of export for the country (OCAB, 2000). This production focuses almost exclusively on exports, as less than a third is for the local market. The banana sector has been heavily supervised since its inception during the colonial period. After independence, new institutions were created, starting with the Technical Assistance for the Modernization of Banana and Fruit Production Company (SOMOBAF) set up in 1962, and then the National Packaging Society (SONACO) established in 1963. Different cooperatives, grouped under a single large cooperative, managed banana production. The Côte d'Ivoire's Banana and Fruit Production Agricultural Cooperative (COFRUCI) was replaced in 1975 by the state-run Ivorian Fruits and Vegetables Marketing Company (Koffi Kouassi *et al.*, 2005) which folded three years later, opening the door for the return of a cooperative, reinstated as Producers' Cooperative for Commercialization of Fruits and Legumes in Côte d'Ivoire (COFRUITEL). This institution then experienced managerial and technical difficulties, resulting in a real crisis for the banana value chain and a significant drop in production (from 166 000 tonnes in 1974 to 86 000 tonnes in 1982) and fruit quality deterioration (Koffi Kouassi *et al.*, 2005). The COFRUITEL was disbanded in 1986, thus opening opportunities for autonomous export structures while the government withdrew from production altogether.

Since 1991, the Pineapple and Banana Producers/Exporters Central Organization (OCAB) has organized the value chain and the profession. OCAB is also responsible for transportation, while independent marketing Groups that are members of OCAB are in direct contact with importers with whom they establish trade relations, without state intervention. In 1992, the banana sector was fully liberalized, prompting the entry of multinational companies such as the CBS and Banador groups, which have invested in the sector (COGEA, 2005).

Deregulating the banana sector, along with fully involving private enterprises, has had a significant economic effect and the share of bananas in agricultural GDP has increased between 8 and 10 percent, with Côte d'Ivoire becoming "the first African supplier of bananas to the EU market" (Koffi Kouassi *et al.*, 2005). The economic situation of small producers, however, has not yet improved. Indeed, in 1982, smallholders were responsible for 24 percent of exports, but this share declined significantly starting in the mid-1980s, especially after the establishment of autonomous export structures in the early 1990s. By 1988, approximately 160 smallholder plantations generated only 5 percent of total exports. In 2000, there were only 52 small (less than 10 ha) banana plantations left in the country (Koffi Kouassi *et al.*, 2005). It therefore seems that liberalizing the sector has gradually marginalized small producers/growers, as most of them are poorly supervised and equipped and do not have sufficient resources to meet export production requirements, given their very low yield levels (5 t/ha) and their limited capacity to invest to sustain their competitiveness (OCAB, 2000). Following liberalization, the value chain has become more concentrated; it now has a small number of large producers while many small farmers have been forced to leave the sector (Koffi Kouassi *et al.*, 2005).

In summary, the lessons from the Côte d'Ivoire banana value chains are as follows:

- (a) A state company or a cooperative of producers (if managed like a parastatal) is an inefficient vehicle to manage an export-oriented value chain with multiple multinational competitors and diverse import markets requiring stringent standards and quality specifications. The numerous failed organizations that succeeded each other in managing the banana export market segment point to internal leadership and management weaknesses, as well as lack of adapted governance structures.
- (b) When the sector is fully liberalized and competition among private actors is allowed, this also tends to facilitate coordination (as done by OCAB) and to result in improved competitiveness and performance as shown by the market share gains following deregulation. However, greater competition and the entry of multi-nationals also meant squeezing out the small-scale producers, who ended up being marginalized.
- (c) In this case what seems to be required is fostering of a true banana interprofession, inclusive of smallholder producers' representatives. These representatives would need special incentives to strengthen their bargaining capacity and improve their ability to comply with higher standards, as well as training in technical, managerial and marketing areas so they can become more effective players within the value chain. Here the role of the state is to focus on creating the correct incentives needed to strengthen the inclusive side, leaving the goal of competitiveness to market processes and coordination among private actors.

### **C. Lessons from the case studies: implications for smallholder inclusiveness**

Small producers of traditional cash crops (groundnuts, cocoa and cotton) were not always able to diversify their activities to other crops, especially in export markets. Capturing market shares in non-traditional high-value chains requires significant investments and added costs to comply with standards and more stringent quality requirements. Moreover, success in these markets requires strong and well-established organizational capacity, quality infrastructure for post-harvest handling and flexible logistics. For all these requirements, smallholders are at a disadvantage compared to entrepreneurs or medium- or large-sized farms (Fontan, 2006). The limited internal capacities and low assets of small producers cause them to be excluded from export value chains.

The tightly-integrated high-value export food value chains, the relentless drive to cut costs (including coordination costs) and the need to adjust constantly to quickly-evolving consumer preferences in high-income countries all combine to exclude small scale producers from participation. Consequently, small producers have found themselves marginalized and facing slow erosion of their export market shares. For example, like the banana sector in Côte d'Ivoire, small scale string bean producers in Senegal also saw their export share drop, from 95 percent in 1999 to 52 percent in 2005 (Maertens *et al.*, 2009).

However, there are many niche markets and high-value chains for which smallholder farmers can offer a comparative advantage and successfully partner with agribusinesses. This is especially the case for domestically-oriented segments of the high-value chain or when value chains rely on labour-intensive production, for which smallholders can be more advantageous. An example is the domestic segment of the pineapple sector in Ghana where small producers are still present. Subcontracting mechanisms have also facilitated integration and protection for small producers, particularly for less perishable products. Maertens *et al.* (2009) developed the example of outsourcing contracts for the string bean value chain in Senegal. Humphrey (2007) states that "small producers organized in subcontracting mechanisms were able to meet the most demanding markets requirements and demands." Yet cases like these remain rare and, while other opportunities exist, they remain to be fully developed.

One sure mechanism is to strengthen producer organizations to become credible economic players, effectively intermediating between small-scale farmers and their economic and business partners. Producer organizations with sufficient management capacity can effectively bridge the gap between production and product quality enhancement to ensure enhanced capacity to comply with private standards and successfully fulfil market requirements and contractual obligations. Developing a strategy for effective capacity building for the producer organizations is thus a central prerequisite for coherent development of competitive and inclusive value chains. It is also a key role for the public sector in fostering an enabling environment for value chain development.

## 4. Staple food value chains and the search for an appropriate development model

### 4.1 Characteristics of staple food value chains

Compared to export commodities, staple food value chains can have a far more significant impact on national food security and poverty reduction in West Africa. For example, the maize value chain in the region focuses on local and regional actors, from producers to consumers, through various retailers, processors and other intermediaries (Boone *et al.*, 2008). Similarly, millet and palm oil are largely consumed locally in the Western basin (CILSS *et al.*, 2010) and out of the 50 000 tonnes of palm oil produced in Guinea, only 9 000 are exported, implying that the rest is consumed locally. As another example, the rice produced in Guinea is almost entirely marketed domestically (CILSS *et al.*, 2010).

#### ***An institutional setting***

A key feature of staple food value chains is the fact that these can be neither entirely state-run (as they have multiple purposes, numerous marketing channel possibilities, and no significant revenues to be directly captured by the governments) nor entirely by the private actors (as they have low margins of returns and higher risks and uncertainty in production and marketing). Rather, a mixed model is at work here, with policymakers and development partners promoting appropriate public/private partnerships

(PPPs)<sup>9</sup> to promote investments in staple value chains. This goal is stated in many of CAADP's sectoral strategies, in which a prominent position has been given to the need to establish PPPs. However, in fact, the private sector participation in the staple food value chains is much lower than expected, pointing to serious constraints (meaning an unfavourable environment). In staple food value chains, the public role is limited, and focused on facilitating private-led initiatives to stimulate production, marketing and trade.

Trade policies also play an important role for staple value chain development. In this area, governments in the region tended to be interventionist, without the necessary coherence expected to harmonize the various declared strategy aims. Governments "occasionally resort to protectionist measures in case of poor cereal harvests" (Araujo Bonjean *et al.*, 2008). For example, at one point or another, Ghana, Nigeria and Senegal all taxed rice imports to control them and protect their national productions (Lancon-Benz and David, 2007). Burkina Faso, Mali and Niger have also not hesitated to ban grain exports in order to reduce price increases and allow the supply of local markets and populations (Boone *et al.*, 2008).

### **Structural impediments for staple food value chains**

Staple food value chains face several structural limitations to their development:

- Staple food production is dominated by small-scale agriculture, with a large majority of farms of less than 5 ha. This implies insufficient capital assets, limited investments, and lack of access to inputs and technology to sustain higher yields.
- The problem of soil fertility is serious and quite widespread, compounded by the fact that staple crops tend to be grown in areas where rainfall is not always sufficient or abundant but subject to high variability. This also contributes to yields below the potential.

Other limitations of these sectors are closely linked to production upstream and downstream and producers face many obstacles and challenges:

- Staple food producers face an unfavourable policy framework and lack of marketing incentives. This includes limited access to information, inadequate extension services and limited access to inputs (fertilizers, seeds, etc.) and credit (Boone *et al.*, 2008; CILSS, 2010).
- Staple food value chains face obstacles to trade, especially at the regional level where the potential for exchange is higher. Regional trade in staple food products is greatly hampered by red tape at the borders, inconsistent and contradictory policies and different trade and unit standards.

The following two case studies will provide a specific context to describe these impediments and point to ways of overcoming them in order to realize the presumed potential of staple food systems in the region.

## **4.2 Case studies**

### **A. The cassava sector in Ghana: A dichotomy between local markets and the export sector**

Cassava is one of the most important crops in Ghana, seen from either a strictly economic point of view or in regard to food security. It is indeed the first crop in terms of quantity produced and the second in terms of value (FAOSTAT, 2012) as well as consumption, insofar as it constitutes 20 percent of daily calorie intake in the country (MAFAP Project, *forthcoming*).

<sup>9</sup> Since there is no universally accepted definition of PPP, the 2005 World Economic Forum attempted to define the concept as involving "business and/or not-for-profit civil society organizations working in partnership with government agencies, including official development institutions. It entails reciprocal obligations and mutual accountability, voluntary or contractual relationships, the sharing of investment and reputational risks, and joint responsibility for design and execution", WEF (2005).

The cassava sector has three main processing options; these are *gari*, which is mainly for local consumption, cassava starch and cassava chips, which are both for export. Studies have shown that the industry favours local consumption and markets, however, while exports are marginal (MAFAP Project, forthcoming). Cassava plays a critical role in alleviating periods of food insecurity, as it is compatible with difficult production conditions and can be grown and consumed within a short period.

However, the various processing possibilities could be seized to develop the value chain, in a similar fashion to other initiatives undertaken by the Ghanaian state, such as the Presidential Special Initiative (PSI) launched in 2001, which focused on developing export opportunities, especially from cassava starch-derived products. To that end, the Ghanaian state implemented the Ayensu Starch Company (ASCO), resulting from a PPP charged with transforming fresh cassava production into starch. This initiative involved establishing contracts between cassava producers and ASCO, under which farmers received inputs and technical assistance. ASCO's implementation also fostered organization by farmers into several associations, but for the most part organization still remained weak (Global Donor Platform for Rural Development, 2011). The strategy eventually failed because it had underestimated competing cassava uses, especially for local consumption (MAFAP Project, forthcoming). ASCO had to close its doors in 2008; it had been underutilized due to the fact that producers preferred to orient their production toward local markets because they received higher prices than those offered by ASCO.

This experience illustrates the respective roles of the various actors in the cassava value chain. Research is handled by public institutions like the Council for Scientific and Industrial Research (CSIR) or the Crop Research Institute. The latter conducts research on production, and marketing. The public sector is also involved in agricultural extension and technical advice operations, through the Ministry of Agriculture and Food; however, a new approach seeks to give private actors a larger role in delivering technical advice and extension services (Djigma, 2011a). Cassava production is largely in the hands of small-scale producers. It is a flexible crop adapted to variable climatic conditions and can easily be grown even in low fertility soils, as it requires little or no fertilizer (Djigma, 2011a). Downstream, a larger number of small and medium enterprises handle cassava processing and marketing.

Cassava value chain development hinges on a dynamic processing segment. Options can include, on the one hand, better serving local market demand through a steady supply of *gari*, and on the other hand, developing high value-added processing for cassava starch<sup>10</sup>. This twin-track value chain strategy would require active involvement of several actors. First, the state can take the lead in improving deficient road infrastructure, which is a key obstacle. The state also has a role in promoting a transparent information system to encourage competitiveness along the value chain and attract more actors from the private sector.

Another key objective for the cassava value chain development is to promote better processing that will add value as well as reduce the large post-processing losses<sup>11</sup>. This is squarely in the domain of private actors, who can mobilize expertise and technical capacity. In the area of research, both to stimulate productivity (research for new varieties and production processes) and develop new processing technologies, a strong relationship between the public and private sectors seems more suitable.

The role of producers and their organizations is also crucial in the cassava value chain development strategy. They must benefit directly from productivity-enhancing support and from the research findings. Through strong and self-reliant organizations, cassava producers can better leverage or access needed credit and marketing opportunities for their supplies or through sub-contracting arrangements (with processors, finance agencies, etc). In the end, the success of Ghana's cassava value chain development

<sup>10</sup> As stated in the Medium-Term Investment Plan, which seeks to modernize agriculture in Ghana, including the cassava sector.

<sup>11</sup> It is now estimated that post-processing losses amount to about one third of the production.

strategy hinges on how effectively producers are integrated into the supply chain, whether for local or export markets.

Clearly, cassava value chain development in Ghana, and elsewhere in West Africa, must focus on creating the right dynamics within the sector to allow market-determined cassava by-products to be produced and commercialized. While local and regional markets are the dominant drivers, export opportunities may also develop and thrive as a result of a more dynamic cassava value chain. However, as the experience described clearly demonstrates, focusing solely on the export segment of a predominantly domestically-marketed commodity is not efficient. What is required is a focus on getting the fundamentals of the staple value chain in place. Market segments (whether local, regional or international) will follow as opportunities present themselves.

### **B. The maize sector in Burkina Faso: Obstacles and opportunities for a developing multi-market value chain**

Maize is an important crop for food and nutrition security throughout West Africa. Burkina Faso, one of the key maize producers in the region, seeks to develop maize from subsistence to cash crop and to meet both the domestic and export markets. Indeed, since 2005, maize imports have been declining while exports are rising (Djigma, 2011b). Over the same period, maize market penetration reached nearly 75 percent of production in 2008 (Boone et al., 2008). The maize sector in Burkina Faso faces the usual constraints of a staple crop on the verge of becoming a fully-developed market-oriented value chain.

Maize potential is enormous, owing to its adaptability to various local conditions and also to the multiple market opportunities for food consumption, animal feed or industrial uses (via starch). The multiplier effects for the local economy, jobs and agro-industrialization are also substantial. However, to achieve the full potential of maize value chains, a number of constraints and bottlenecks must be removed. For producers there are two key constraints to overcome: insufficient access to credit for inputs to raise yields and productivity, and ineffective handling of maize surplus marketing that could be both efficient and remunerative. These constraints also require effective instruments to reduce risks (in production and marketing) and price variability.

The potential and the constraints for maize require a different value chain model than the ones that have prevailed for export commodities. In the case of maize (and other similar staple foods), whose production, processing and marketing are largely in the hands of private actors, the optimal value chain model must be multi-actor and based on coordination rather than on full vertical integration. In this model, the government plays a critical – but only supportive –role. Some of the current interventions (partial subsidies for fertilizers, direct purchases for national food security storage through the National Security Stocks Management Company (SONAGESS), price subsidies to deficit regions) could be revised or improved while other interventions could be strengthened (support for research and dissemination of improved seeds through the Institute of Environment and Agricultural Research (INERA), extension services and capacity building, construction of a better legal framework for commercial transactions, price and market information).

Maize marketing and processing is also dominated by a large number of small-size players with limited capacity for upscaling or for introducing productivity-enhancing technologies. Maize is collected off-farm by numerous collectors of various sizes who sell to wholesalers, who in turn deliver the maize via independent transporters to secondary or urban markets. Downstream in the value chain, maize marketing is hindered by weak legal protections and the resulting lack of transparency. As a consequence, maize markets remain

informal, operating without the support of an open and transparent market information system that could smooth out the transactions (e.g. in terms of weight, price and product quality). Moreover, the inadequate infrastructure, along with onerous customs and administrative procedures (including excessive red tape and corruption), keeps the unit transportation costs too high and hinders regional trade.

Maize processing (milling) is handled by a large number of milling operations. Small-scale milling is geared to meet farm maize consumption, while milling by the few large industrial mills is aimed at urban markets (Djigma, 2011b). To encourage more agroprocessing for maize, specific initiatives can be taken by the government, such as credit facilities for small and medium-sized millers to upgrade their capacity and their technologies. There is also a need to increase the processing capacity for maize to meet the growing domestic urban market. This should be private sector-led, with appropriate incentives from the government whose role is even more critical in fostering a favourable environment for facilitating maize trade locally and regionally (across borders).

On the production side, resolving all the various constraints faced by smallholders requires the presence of strong and credible producer organizations, capable of meeting the needs of their members. Properly structured and properly managed they can facilitate producers' access to funding and loans and quality inputs and also help facilitate producers' training and technology transfers (Djigma, 2011b). In Burkina Faso, producer organizations have a long way to go before they become effective and credible economic players. Starting in the 1990s, they emerged as a substitute for the retreating state in providing support to farmers (input procurement for producers, extension and technical advice, product marketing, etc.). Yet these organizations were, by and large, highly ineffective in performing these tasks as a result of both internal (governance, structures, overly broad objectives) as well as external (unsupportive environment) factors. Even the cooperative law (n°014/99/AN), which attempted to anchor the producer organizations along specific value chains and with an economic purpose, did not help much as they were better structured to advocate than to deliver tangible services to their members. These weaknesses are slowly being recognized and a new generation of cooperatives and unions are developing that recognize the importance of providing economic services for their members, which forces them to be narrowly focused along specific value chains.

In Burkina Faso, cereals have been represented by a quasi-interprofessional body, the Interprofessional Committee on Cereals and Nibe (CIC-B), which is supported by the state and mandated to play the role formerly held by government agencies. In principle CIC-B is open to all players within the cereal sector (producers, processors, transporters and traders, and service providers), but its structure continues to be dominated by a few producer organizations and by a hierarchical leadership. Consequently, the broad coverage of its mandate (all cereals except rice) and the uneven representation of value chain actors have limited the effectiveness of the CIC-B to play the traditional role of a value chain interprofessional committee.

Access to inputs (improved seeds and fertilizer) and credit remains the key impediment to enhanced yields and productivity. The development and distribution of improved seeds is led by the state, though there is room for effective PPPs. For example, the direct subsidy of fertilizer by the government is highly inefficient, partial and financially unsustainable. More effective alternatives could include private schemes, such as the use of warrantage as a means to secure loans for inputs or other income-generating activities. A warrantage credit system consists of an agreement between a financial institution and a group of producers, by which credit is extended in exchange for placing cereals or other marketable products in storage for a period within a season. The loan is provided for use in an income-generating activity and should be returned with interest or the stored product can be forfeited to the bank, which can sell and keep the proceeds as payment for the loan. Loans are provided to individual farmers but the organization offers collateral.



Since its introduction in Niger by FAO in late 1990's, warrantage has attracted interest and is being promoted in various cereal-producing regions in West Africa. Currently, warrantage is being applied by a growing number of cereal-focused producer organizations in Burkina Faso. However, warrantage has its own requirements and conditions for success. Among these conditions are: (1) well-informed and trained farmers; (2) proper storage facilities; (3) existence of storable products; (4) sufficient volumes of good quality offered for storage; (5) cyclical variation of prices; (6) availability and level of credit; (7) stock controls; (8) proper farm accounts to determine effective surpluses by participating farmers; and (9) effective monitoring of the stocks. Producer organizations that have practiced warrantage are still going through a learning curve to ensure that all these conditions are satisfied.

Marketing surplus maize by farmers also requires organization among farmers, as well as proper structures to generate and disseminate market and price information, and effective instruments to manage and mitigate production and marketing risks. Developing a transparent market information system requires a solid institutional base to ensure openness, usefulness, accessibility and sustainability. Such a system should assist producers and value chain actors to better plan maize sales, negotiate effectively with buyers and manage stocks between surplus and deficit regions. The system should also assist the national authorities to plan for purposes of national food security. Critical information needed by maize value chain actors would include: maize quality; quantities by zone; varieties; retail and wholesale prices; stocks; transport costs and availability; prices at local, regional or international markets; and techniques for production and processing, as well as information on relevant laws and regulations, including rules and conditions for access to credit, inputs, etc.

Currently, several types of information systems exist that are fragmented and often unusable by the actors (both in terms of timeliness and information channels). A multi-stakeholder scheme for market information can be devised and preferably housed within a maize- dedicated interprofessions. Such a system must also be self-financed and anchored in a structure that can ensure proper monitoring and evaluation. Thus, a multi-stakeholder, privately-led system that is self-financed and geared to be widely available to all value chain actors is most suitable. Financing such a system on a sustainable level could include: (i) fees for service by information receivers; (ii) fees for participating and benefiting producer organizations, NGOs, cooperatives or others; and (iii) charges per use of mobile phones to receive information. Clearly, in order to be developed and fully operational, such a system would require protocol agreements involving multiple players, such as the maize interprofession, telephone carriers and all interested players within the value chain, as well as support from the state.

## 5. Conclusion

This paper examined three major value chain models prevalent in West Africa, using a historical framework for policy and institutional analysis with the aim to draw lessons for a new and suitable staple food value chain model.

The analysis of three case studies from traditional export commodities revealed the following salient conclusions: that poor governance can have a negative impact on competitiveness and productivity over the long run and that internal or external drivers cumulatively combine to reduce competitiveness of the sector and lead to its eventual demise. In all three cases analysed, state control of the value chain undermined the incentives for sustained investments and prevented research into productivity-enhancing technologies to improve yields, prevent reduction in soil fertility or make more efficient use of limited resources. State

agencies also suffered from an erosion of qualified technical and managerial talent, depriving them of the ability to carry out analysis, forecasting and planning, and resulting in poor decisions and myopic views of the value chain and future trends. Likewise, weak roles played by producers and their organizations were evident in most cases (even when producers were organized, as in Mali and Senegal). Without strong, capable and competent organizational leadership it is hard to ensure sustainably strong performance within the commodity value chain. Consequently, good and inclusive governance should lead to better long-term planning, especially if key players are involved. Agroprocessors need to coordinate among themselves and explore win-win opportunities with state agencies and credible producer organizations to forge contractual buyer-seller arrangements. Strengthening producer organizations to acquire economic and market credibility is an essential step toward value chain development.

For high-value export commodities run by the private sector and tied to global value chains led by retailers in high-income countries, the main lesson is that when the states do not interfere but allow the private actors to coordinate freely among themselves, they usually perform much better than when the state is in control. Examples of growing export markets and captured market shares can be found in West Africa. However, in each of these cases, the system is unfavourable to small-scale producers, who wind up marginalized. Greater opportunities exist for high-value products that have a sizeable outlet in the domestic market. In these cases, there are greater opportunities for agribusinesses to forge contractual or out grower schemes with farmers. However, evidence shows that actual cases of this kind remain few and far between and that more can be done to foster stronger supply/buy partnerships between agribusiness and smallholders.

What do these experiences say about staple food value chains such as maize and cassava, two critically important commodities in West Africa on the verge of becoming major cash crops serving the vast domestic and regional market? Staple food value chains (such as maize and cassava) can serve several important market outlets, all of which are potentially huge (food, feed and industrial use). In these value chains, the contribution of the state, though critical, is vastly different from the type of interventionism that prevailed (before its demise) with the export commodity models.

What follows are a set of recommendations on how to rebuild food value chains in West Africa, ensuring that they can be both competitive and inclusive of smallholders.

## **Recommendations:**

### ***Rebuilding the traditional export commodity model:***

1. Strengthen risk-management capacity for farmers: this involves providing insurance, transparent and actionable market information, and technical, managerial, financial and leadership training.
2. Promote further processing to add value: work with agroprocessors and finance agencies under PPPs to coordinate investments in infrastructure, research, productivity-enhancing initiatives and training to raise the technical capacity of agribusiness managers and staff and to facilitate procurement from farmers.
3. Develop more transparent and inclusive governance: this requires promoting powerful, competently-led interprofessions and producers' organizations with qualified leaders who are well-informed and competent to best articulate the needs of the farmers and to bargain for win-win solutions with other value chain stakeholders. Good governance is built on the basis of empowered parties; this takes time but needs an enabling regulatory and institutional framework to build strong cooperatives and producer organizations capable of integrating the entire value chain interprofessions.
4. Clearly delineate the role of the state as that of regulator and facilitator but not direct manager of market operations and activities: the state must support the laws and regulations and provide the right incentives to allow private actors to coordinate their actions to create greater value along the

supply chain and share more widely in the added value.

5. Strengthen the economic capacity of producer organizations: while membership should focus on merit and active participation (and payment of dues), focus should be placed on ability and capacity to deliver economic services to the members and not simply on the function of general lobbying of the government to provide assistance to poor farmers.

***Non-traditional high-value export commodity model:***

1. Establish that the role of the state is to maintain and strengthen regulations to support high quality and standards.
2. Facilitate greater coordination among value chain players to enhance competitiveness of the export market; this is a role for the state.
3. Promote domestic demand to encourage more participation by smallholders and to compensate for their marginalization from the export market.
4. Facilitate farmers' organizations, enhancing their ability to bargain effectively, and to have greater access to information and technical, managerial and leadership training.
5. Encourage coordination between farmers and agroprocessors and facilitate opportunities for contractual arrangements.
6. Sponsor multi-stakeholder forums, fairs and other meeting opportunities to bring all stakeholders together to forge new relationships and business partnerships; this can be facilitated by the state.

***Constructing the staple food value chain model:***

1. Support research, development and distribution of improved seeds; this is a key role for the state.
2. Support and reduce the cost of credit for strategic staple food value chains that need special assistance, through credit rates.
3. Support a fertilizer supply strategy based on facilitating procurement, storage and distribution to reduce the cost to small farmers and enhance availability and timely access; the state should also strengthen the controls for fertilizer quality and ensure that information on fertilizer use by crop is fully transmitted to producers.
4. Reduce marketing risks by supporting private-led multi-stakeholder schemes to generate and distribute the needed market information to producers and value chain actors; such a market information system must be demand-driven, mostly self-financed and durable (i.e. sustainable).
5. Encourage warrantage credit system by co-financing storage for producers' organizations.
6. Harmonize marketing and trade policies to encourage local and regional trade in staples.
7. Provide support to producer organizations to become effective economic players; specifically, this would entail: (i) improving ability to negotiate credits and finance; (ii) improving capacity to conclude contractual arrangements with agribusinesses, including outgrower schemes; (iii) strengthening internal leadership capacity and governance to ensure enhanced role in the interprofession; (iv) training farmers in improving quality of products supplied, especially to agroprocessing with high quality requirements; (v) subsidizing technical managerial training for specific value chains and products.
8. Promote PPPs, which can take several forms within the staple food value chain model; specific actions include: (i) institutionalize dialogue between public agencies and private actors to break down mistrust, delineate the role of the state versus the private sector and build on new partnership opportunities for collaboration; (ii) ensure effective participation of all-inclusive private actors and producers during policy formulation and implementation; (iii) resist allowing the state to pick winners and losers among sectors or to push for a particular market segment (a typical bias of ministries and public agencies is to favour export commodities over products for domestic markets; instead the state should allow market forces to determine which opportunities and value chains to develop – whether for domestic demand outlets or for exports to regional markets or beyond).

## 6. References

- Akiyama T. (2001), Coffee Market Liberalization since 1990, in Akiyama, T., Baffes, J., Larson, D., and Varangis, P. (2001), *Commodity Markets Reforms: Lessons of Two Decades*, World Bank editions, Washington D.C. USA, pp.35-82
- Akiyama, T., Baffes, J., Larson, D., and Varangis, P. (2001), *Commodity Markets Reforms: Lessons of Two Decades*, World Bank editions, Washington D.C., USA.
- Amanor K.J. (2009), Global food chains, African smallholders and World Bank governance, *Journal of Agrarian Change*, Vol. 9, No. 2, pp.247-262.
- Araujo Bonjean C., Aubert M. and Egg J. (2008), Commerce du mil en Afrique de l'Ouest : les frontières abolies ?, *Communication au Colloque « Intégration des marchés et sécurité alimentaire dans les PED »*, CERDI, Clermont-Ferrand, France, 3-4 novembre 2008.
- Blein R., Soulé B.G., Faivre Dupaigne B. and Yerima B. (2008), *Agricultural Potential of West Africa (ECOWAS)*, Fondation pour l'agriculture et la ruralité dans le monde, Presles, France.
- Bonnassieux A. (2002), Filière coton, émergence des organisations de producteurs et transformations territoriales au Mali et au Burkina Faso, *Les Cahiers d'Outre-mer* Vol. 220, Octobre-Décembre 2002
- Boone P., Stathacos Charles J.D. and Lum Wanzie R. (2008), *Evaluation sous-régionale de la chaîne de valeur du maïs rapport technique ATP*, USAID.
- Brüntrup M., Hönich U., Kaps C., Nguyen T., von Richthofen L. and Wille A. (2008), *Politique commerciale et développement agricole au Sénégal*, Institut Allemand de Développement, Bonn, Germany.
- CAADP (2003) *Framework for the improvement of rural infrastructure and trade-related capacities for market access (FIMA)*. NEPAD.
- CILSS, FAO, USAID, FEWS NET, PAM and RESIMAO (2010), Commerce Transfrontalier et Sécurité Alimentaire en Afrique de l'Ouest / Cas du Bassin Ouest : Gambie, Guinée-Bissau, Guinée, Mali, Mauritanie, Sénégal, Ouagadougou, Burkina Faso.
- COGEA (2005), *Evaluation de l'Organisation Commune de Marché (OCM) dans le secteur de la banane*, Rapport final, Rome, Italy.
- Courade G., Grangeret I. and Janin P. (1991), La liquidation des bijoux du prince : les enjeux de la libéralisation des filières café-cacao au Cameroun, *Politique Africaine*, No 44, pp.121-128.
- Danielou M. and Ravry C. (2005), *The rise of Ghana's pineapple industry*, Working Paper series No. 93, ESSD Africa, World Bank, Washington D.C., USA.
- Delpeuch C., Vandeplas A. and Swinnen J. (2010), *Revisiting the "cotton problem": a comparative analysis of cotton reforms in Sub-Saharan Africa*, 84th Annual Conference of the Agricultural Economics Society, Edinburgh, United Kingdom.

- Djigma A. (2011a), *Analyse des instruments de politique agricole pour l'intensification de la production des cultures alimentaires de base : riz, maïs et manioc*, Rapport produit pour l'Organisation des Nations Unies pour l'alimentation et l'agriculture, Rome, Italy.
- Djigma A. (2011b), *Analyse des instruments de politique agricole pour l'intensification de la production des cultures alimentaires de base au Burkina Faso : riz, maïs et manioc*, Rapport produit pour l'Organisation des Nations Unies pour l'alimentation et l'agriculture, Rome, Italy.
- Dolan C., and Humphrey J. (2004), Changing Governance patterns in the trade in Fresh vegetables between Africa and the United Kingdom, *Environment and Planning A* Vol.36, No.3, pp.491 – 509.
- ECOWAS-SWAC/OECD (2007a), Atlas on Regional Integration in West Africa: Cocoa, *Economy Series*, ECOWAS-SWAC/OECD.
- ECOWAS-SWAC/OECD (2007b), Atlas on Regional Integration in West Africa: Cotton, *Economy Series*, ECOWAS-SWAC/OECD.
- ECOWAS-SWAC/OECD (2007c), Atlas on Regional Integration in West Africa: Coffee, *Economy Series*, ECOWAS-SWAC/OECD.
- FAOSTAT Database (2012).
- Fold N. et Gough K.V. (2008), From smallholders to transnationals: the impact of changing consumer preferences in the EU Ghana's pineapple sector, *Geoforum*, Vol. 3, pp. 1697-1697.
- Fontan C. (2006), *L'«outil» filière agricole pour le développement rural*, document de travail du Centre d'économie du développement, Université Bordeaux IV, France.
- Freud C. (1997), *L'arachide au Sénégal: un moteur en panne*, Editions Karthala, Paris, France.
- Gagné M., Carré G. et Fall M. (2008), *Le mouvement coopératif au Sénégal*, Société de Coopération pour le Développement International.
- Global Donor Platform for Rural Development (2011), *The strategic role of the private sector in agriculture and rural development*, Working Paper Ghana, Bonn, Germany.
- Hirsch R. (2002), Les filières oléagineuses d'Afrique de l'Ouest: quelles perspectives face à l'intégration et à la mondialisation?, *Oléagineux, corps gras, lipides*, Vol. 9, No.6, pp. 426-432.
- Humphrey (2007), The supermarket revolution in developing countries: tidal wave or though competitive struggle?, *Journal of Economic Geography*, Vol. 7, pp. 433-450.
- Kouassi Koffi S., Adiko A. et N'Guessan A.B.E., *Dynamique sectorielle et perspective de développement de la filière banane en Côte d'Ivoire*, 2005.
- Lancon F. et David Benz H. (2007), *Rice imports in West Africa : trade regimes and food policy formulation*, presented at the 106th seminar of the EAAE on Pro-poor development in low income countries : food agriculture, trade and environment, 25-27 Octobre 2007, Montpellier, France.

- MAFAP Project (forthcoming), *Analysis of incentives and disincentives for cassava in Ghana*, MAFAP Technical note, Food and Agriculture Organization of the United Nations, Rome, Italy.
- Maertens M., Minten B. et Swinnen J.(2009), *Growth in high-value export markets in Sub-Saharan Africa and its development implications*, LICOS Discussion Paper No. 245/2009, Katholieke Universiteit Leuven, Belgium.
- Murphy S. (2010), Changing perspectives: small-scale farmers, markets and globalization, *Hivos Knowledge Programme*, IIED, London, United Kingdom.
- Ndiaye M. (2008), State control and poor economic growth performance in Senegal, in Ndulu et al., eds., *The Political Economy of Economic Growth in Africa, 1960-2000: Country Case Studies*, Cambridge University Press, 2008, pp. 402-425.
- Organisation Centrale des producteurs-exportateurs d'Ananas et de Bananes (2000), *Le commerce, l'environnement et le développement durable en Afrique de l'Ouest et du Centre dans une perspective sectorielle : cas de la production et de l'exportation de l'ananas, de la banane et de la mangue en Côte d'Ivoire*, Document pour le séminaire sur le commerce, l'environnement et le développement durable pour l'Afrique de l'Ouest et du Centre, ICTSD, 13-14 Juillet 2000, Libreville, Gabon.
- Rakotoarisoa M.A., Iafrate M., and Paschali M. (2011), *Why has Africa become a net food importer ? Explaining Africa agricultural and food trade deficits*, Trade and Markets Division, Food and Agriculture Organization of the United Nations, Rome, Italy.
- Seminar für Ländliche Entwicklung (2006), *Poverty Orientation of Value Chains for Domestic and Export Markets in Ghana*, SLE Publication Series, Centre for Advanced Training in Rural Development.
- Singh B.P. (2002), Nontraditional crop production in Africa for export, in Janick J. and Whipkey A., *Trends in new crops and new uses*, ASHS Press.
- Takane T. (2004), Smallholders and nontraditional exports under economic liberalization: the case of pineapples in Ghana, *African Study Monographs*, Vol.25, No.1, pp. 29-43.
- Tefft J. (2004), *Mali's White Revolution: Smallholder Cotton from 1960 to 2003*, Conference Paper No.10, presented at the NEPAD/IGAD regional conference "Agricultural Successes in the Greater Horn of Africa", November 22-25, 2004, Nairobi, Kenya.
- Varangis P. et Schreiber G. (2001), Cocoa Market Reforms in West Africa, in Akiyama, T., Baffes, J., Larson, D., and Varangis, P. (2001), *Commodity Markets Reforms: Lessons of Two Decades*, World Bank editions, Washington D.C., USA, pp.191-257
- World Bank Data Catalog (2012)
- World Economic Forum (2005) *Building on the Monterrey Consensus: the growing role for public-private partnerships in mobilising resources for development*, World Economic Forum, Geneva, Switzerland.
- Yiriwa Conseil (2001), *Etude pour la promotion des filières agro-industrielles*, Bamako, Mali.

## Annexe 1. A few parastatals and their functions

Country – main value chain(s)	Institution	Roles and tools
<b>Cameroon</b> – Cotton, Coffee, Cocoa	Office National de Commercialisation des Produits de base	<ul style="list-style-type: none"> <li>• Infrastructure maintenance</li> <li>• Provision of inputs</li> <li>• Determines producer buying price</li> <li>• Cotton, cocoa and coffee export monopoly</li> <li>• Taxation of products</li> <li>• Issues export visas</li> </ul>
<b>Côte d'Ivoire</b> – Cotton, Coffee, Cocoa	CAISTAB	<ul style="list-style-type: none"> <li>• Determines prices along the value chain according to a rating grid</li> <li>• Production quality control</li> <li>• Taxation of production</li> <li>• Stabilizes transport costs</li> <li>• Production marketing</li> <li>• Distributes export quotas</li> <li>• Anticipated average sales Programme</li> </ul>
<b>Ghana –</b> <b>Cocoa</b>	Ghana Cocoa Marketing Board	<ul style="list-style-type: none"> <li>• Production quality control</li> <li>• Stabilises producer buying price</li> <li>• Buys production from producers through the <i>Produce Buying Company</i> monopoly</li> <li>• Export and local processing monopoly</li> <li>• Export Taxation</li> </ul>
<b>Mali – Cotton</b>	Compagnie Malienne pour le Développement des Textiles	<ul style="list-style-type: none"> <li>• Provision of inputs and credit</li> <li>• Provision of public services around production (agricultural training, provision of equipment, agricultural research)</li> <li>• Maintenance and construction of rural roads and infrastructure</li> <li>• Administrative fixing of producer prices</li> <li>• Imports / Exports control through the Société Malienne d'Importation et d'Exportation</li> </ul>
<b>Sénégal –</b> <b>Groundnut/</b> <b>Oilseeds</b>	Office National de Coopération et d'Assistance d'Aide au Développement (jusque 1980) puis Société Nationale de Commercialisation des Oléagineux du Sénégal	<ul style="list-style-type: none"> <li>• Provision of equipment</li> <li>• Subsidised prices and inputs</li> <li>• Determines production prices</li> <li>• Processing monopoly</li> <li>• Marketing monopoly</li> <li>• Groundnut export monopoly</li> <li>• Supervision of Agricultural Cooperatives</li> </ul>

**Sources:** Courade *et al.*, (1991), Tefft (2004), Conte (2004), Akiyama *et al.* (2001), Kaminski (2001), Yiriwa Conseil (2001)

