




Rebuilding West Africa's food potential:

Policies and market incentives for
smallholder-inclusive food value chains



Rebuilding West Africa's food potential: Policies and market incentives for smallholder-inclusive food value chains

Edited by

Aziz Elbehri

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Foreword

The price hike on international food markets in 2007-2008 was a turning point in world agriculture. Despite the surge in food prices, the expected supply response for most smallholder farmers, particularly in Africa, did not occur. The crisis triggered a broad consensus calling for substantial investments in agricultural and rural development to reduce both food insecurity and poverty affecting chiefly rural areas. The price hike also confirmed the urgent necessity of making markets work for and inclusive of smallholder farmers.

In West Africa, this episode triggered a stronger commitment to a food security policy geared toward improving the performance of the agricultural sector. There were renewed commitments to create the enabling environment for greater investment in staple food commodities, long neglected in favor of a few export commodities. The episode also gave a new impetus to the CAADP (Comprehensive Africa Agriculture Development Programme) process which shaped the national agricultural development strategies and the related investment programmes.

The present book focusing on West Africa embodies a thorough analysis of past and present policies pertaining to food value chains without overlooking export commodities. It examines detailed value chain case studies conducted in several countries, covering both staple food commodities (rice, maize, sorghum, millet and cassava) and export crops (cocoa, cotton, oil palm, mangoes and horticultural products). It reviews public and private initiatives and includes thematic analyses on not only the private sector but also farmers' organizations seen as market agents.

This book aims to contribute to filling an existing gap in the literature on food value chains in West Africa. It identifies good practices in value chain development and provides policy guidance to agricultural and rural development stakeholders. It is intended to be a sourcebook for decision makers, especially at a time when many countries in the region have embarked on implementing their national agricultural strategies derived from the CAADP process.

The book recommends several priority areas for action. Key among these are: (a) Policy support to agriculture to achieve food security and poverty reduction must place *greater emphasis* on staple food crops and build stronger market incentives for smallholders' inclusiveness, with particular focus on *women's* access to inputs, credit, better organization and market/business capabilities; (b) Investment strategies aligned with CAADP must ensure *greater policy coordination* between public and private actors and enhance market opportunities, especially through domestic marketing and intra-regional trade; (c) Policy support should focus on developing *market-based* input delivery services, enhancing capacity for producers' organizations to self-reliably access information, inputs, credit and forge credible business linkages with other value chain actors.



David Hallam
Director
Trade and Markets Division
Food and Agriculture Organization of the United Nations



Ides de Willebois
Director
West and Central Africa Division
International Food and Agriculture Development

Editor's note and acknowledgements

This book addresses the central question of how to rebuild West Africa's food potential in light of the heightened concern over food security in the region, especially in the aftermath of the food crisis of 2007-2008. The book has a regional focus, namely the ECOWAS region (15 West African countries) plus Cameroun and Chad (part of the Central Africa region). Also the book places a particular focus on staple food value chains even though export commodities are also covered. The primary concern of the book was to identify and delineate the key features of a new development model suitable for competitive and smallholder-inclusive staple food value chains.

Several studies reported in this book were carried out by FAO Trade and Markets (EST) Division as part of the *All-ACP Program on Basic Commodities* (2008-2011) funded by the European Commission. Other studies were commissioned by EST as part of the program of work on small holder market integration. Finally, additional studies were also made possible with funding from IFAD under a small grant agreement with FAO to co-sponsor workshops on the topic and to produce a consolidated publication (this book). Under the IFAD grant, two workshops were organized; the first workshop was held in Rome in November 2011 and focused on the conceptualisation of an appropriate model for staple food value chains. The second workshop, with a more policy focus was held in Accra, Ghana in July 2012 to which a large number of stakeholders from West Africa participated.

Evidently, a large number of people have contributed to this book. Aside from the authors, whose names are listed under each chapter, several consultants from West Africa contributed indirectly as part of their participation in the All-ACP program through their assistance in organising and facilitating stakeholder workshops and roundtables. Special acknowledgements go to: Salif Foulani Sissoko, Ibrahima Coulibaly, and Fatoumatou Diallo Sireballa (Mali); Idrissa Wade, Abdoulaye Fall, and Papa Dieye (Senegal), Jean-Baptiste Zoma and Ouédraogo Salifou (Burkina Faso), Martin Tseunkeu, Norbert Monkam and Christine Andela (Cameroun).

Participants to the first FAO-IFAD workshop held in Rome (November 2011) also helped shape the argument for an appropriate model for staple food value chains, in particular: David Hallam, David Neven, Siobhan Kelly (FAO), Ides Willebois, Steven Schonberger (IFAD); Michael Morris, John Baffes (World Bank); Michael Weber (Michigan State University); Ethel del Pozo-Vergnes (IIED), Michel Benoit-Cattin (CIRAD), Tanguy Bernard (IFPRI), and Jonathan Coulter, UK.

The second FAO-IFAD workshop, held in Accra, Ghana in July 2012, brought together a large number of Government officials, country CAADP focal points, private industry, producer organisations and academic. The rich deliberations at that workshop were incorporated into the book in various ways. This successful workshop benefitted from a close coordination between FAO-HQ, FAO-Ghana office and the IFAD regional office in Accra under the leadership of Han Ulaş Demirag.

Bringing the various studies to fruition and shepherding through the book preparation process required dedication from a large team of professional and administrative staff at the Trade and Markets Division. Emily Carroll and Sugi Yoo ably provided the required administrative support during the All-ACP program phase (2008- 2011). Daniela Piergentili provided support for the organisation of the Rome workshop (November 2011); Patricia Arquerro, Antonia Caggiani (FAO-HQ), and Henrietta Appiah (FAO-Ghana) provided the superb logistic support to the regional workshop in Accra, Ghana (July 2012); Patricia Taylor, Nadia Laouini and Rita Ashton (FAO-EST), Francesca DEmidio (FAO-TCSR), and Michelle Calcatelli (IFAD), ensured a smooth administrative support for the present book. Marwan Benali assisted with

the organisation of the Rome and Accra workshops, and provided editorial assistance to several draft chapters.

Since the book was prepared simultaneously in English and French, all chapters had to be translated to one or the other language. Special thanks go to Brett Shapiro for his high quality English style editing and to Eric Juillard for translating documents into French and for proof reading the French version of the book. Additional translations were carried out by Chantal Zanettin, Illia Rosenthal, while Fergus Mulligan performed a final proof read for the English manuscript. The formatting and design of the book was ably carried out by Ana Filipa Amaro Costa who demonstrated skill and patience shepherding through the simultaneous formatting of two large volumes.

The final manuscript was reviewed by David Hallam, Director of FAO Trade and Markets Division, and individual chapters were cross checked by Suffyan Koroma, Felix Baquedano, Concepcion "Concha" Calpe, Peter Thoenes, ElMamoun Amrouk, and Jamie Morrison. IFAD staff from the West and Central Division, under the coordination of Barry Abdoul, also provided feedback on the manuscript and their input was incorporated into the synthesis chapter.

Rebuilding West Africa's Food Potential: Synthesis and recommendations

Aziz ELBEHRI

1. Why rebuilding ?

The price hike on international food markets in 2007-2008 was a turning point in world agriculture. The crisis jolted governments of developing countries and their development partners into renewed focus on agriculture after a long period of relative neglect. A broad consensus emerged, calling for increased investments in agriculture and rural development in order to enhance productivity and meet the heightened challenge of food security. The crisis also heightened awareness of the degree of vulnerability for the majority of farmers in developing countries, who could not respond with higher production because the expected supply response to rising prices did not occur.

For West Africa in particular, this episode reinforced the need for a major rethinking of agricultural development and induced a policy correction towards staple food, which had been long neglected in favor of a few export commodities. The West African governments also responded to the disruptions to food trade by redefining food security in terms of self-sufficiency, increased reliance on domestic supply of staple food crops and lower reliance on imports. In the short run, this gave rise to crisis-induced interventions to stimulate production (national initiatives on rice, maize or cassava, depending on the country) and a new impetus to raise productivity in the medium term. The crisis also gave a new momentum to the CAADP process.

More importantly, the post-crisis environment gave rise to a new *modus operandi* giving greater importance to broader agricultural diversification with increased focus on staple food crops. Considered key to food security, these crops have now received more attention, with attempts to address the huge productivity gaps. However, too narrow a focus on staple food products alone is neither feasible nor desirable. The staple food markets would not be sufficient to harness the full agricultural potential in West Africa, given the diversity of growing conditions and agro-ecological systems. Moreover, achieving greater food security requires not only improving food availability but also requires greater access to food which comes through enhanced sources of income that can be facilitated by diversification of agricultural enterprises. Diversification must also continue to give due importance to cash crops and exports, which continue to generate substantial revenues despite the relative erosion of global market shares. Consequently, the new development paradigm embraces diversification that covers both food staple crops and cash crops.

There is clearly a need to rebuild the West Africa food productive capacity through broad-based diversified agriculture. Such rebuilding must be based on the triple objectives of enhancing productivity, fostering market-based competitiveness and ensuring smallholder inclusiveness. In West Africa, improving productivity requires disseminating yield-enhancing best practices, addressing the serious soil fertility depletion, addressing land tenure pressures, and raising returns to labour. Improving productivity also requires managing risks, tackling vulnerabilities, and strengthening resilience of staple

food production. Competitive agrifood value chains must rely on solid demand, supportive industries, quality inputs and firm rivalry; agrifood chains also require an enabling legal and policy environment and coordination among value chain actors.

It is essential to develop inclusive value chains in order to achieve stronger agricultural growth and improve the livelihoods of the rural poor. Given the myriad constraints facing small-scale farmers, greater effort must be deployed to ensure that markets are more inclusive of small-scale producers – including women, who play a significant role in staple food value chains. Women face additional constraints in accessing resources (land, credit, technology, training, extension) and therefore require gender-targeted interventions. As an illustration, much of the rice produced in Burkina Faso is parboiled by women, who play a central role in the potential development of the rice value chain; however, women face a huge set of constraints (in access to credit, training, organization and capacity), which prevents them from playing a far more dynamic role in turning rice into a thriving agro-industry.

Clearly, policy support is crucial to induce the required value chain transformation in West Africa. Equally important is an understanding of the role of the key players essential for such transformation – the public sector, private agro-industry, the finance sector, and the producers and their organizations. Understanding the respective roles of each of these players is an essential part of formulating the required market and institutional reforms and delineating the right policy environment.

2. Getting policies right: priorities for the transformation of the staple food chains in West Africa

The essential players in agrifood value chains can be grouped into four broad categories (or market agencies): (i) public agencies; (ii) agro-industry (input suppliers, processors); (iii) financial institutions; and (iv) producers and their organizations. Each of these players plays a critical and well-defined role within the agrifood system.

The role of the public sector is to provide the catalytic interventions required to create the enabling environment and the right policy setting. However, the full development of staple food value chains rests primarily on the private agribusiness players, including those of small- and medium-scale, who contribute to market creation, innovation and enhancement of quality standards. A dynamic agro-industry also depends on well-functioning credit institutions that forge commercial partnerships with processors, input suppliers and producers, contributing to funding as well as financial training and capacity building. Finally, no value chain can thrive without the producers and their organizations – the necessary market agency that can contribute to more dynamic and inclusive value chain development.

The public sector supports the food value chain development by setting the overall policy environment guided by broad strategic objectives – namely, food security, poverty reduction and growth. The public sector aims to create the enabling environment for business (security, legal frameworks, infrastructure, research and development), and to support smallholder-inclusive market participation. In the context of food value chain transformation, the priorities for policy support include the following: (i) fostering private input markets and providing incentives for their uptake by farmers; (ii) supporting dissemination and transfer of information, including market signals to stimulate exchange and to improve quality and value; (iii) increasing high-impact investments targeting the development and transfer of technologies,

promoting private sector participation, reducing investment risks and promoting public-private partnerships; (iv) equalizing the market opportunities for domestic producers vis-a-vis competing imports and harmonizing trade policies with domestic support measures; (v) promoting schemes to encourage greater engagement and developing stronger linkages between producers and buyers; and (vi) strengthening the capacity of small farmers and their organizations to expand market participation.

2.1 Boosting productivity: promoting private input markets and creating the correct incentives for input uptake

Among the key drivers for enhancing productivity of staple food crops are policy incentives and measures that foster higher input use by farmers. The focus must be placed on encouraging private initiatives and market-based schemes, while public agencies can play an important direct role in seed research and development, as well as catalyzing privately-led commercial seed production and distribution. At the initial stages of input market development, the public sector can also lower the cost of inputs to producers by subsidizing private bulk purchases and providing tax incentives for private input networks and dealers. Another critical public role is to enforce the quality controls on fertilizers and seeds.

On the other hand, direct fertilizer or seed subsidies by the government to farmers have rarely worked; they are unsustainable and subject to leakages (including smuggling across borders) and have very low impact apart from a temporary boost to production. Far more seriously, direct input subsidies tend to discourage the emergence of viable and private provision of inputs to producers. Fertilizer subsidy programmes, often used by governments, have rarely been successful. For example, Nigeria tried a fertilizer input subsidy, only to abandon it as unworkable, leaky and inefficient. Instead, Nigeria turned to indirect support for input uptake by facilitating access to credit. There are, however, noteworthy experiences with targeted subsidies taking place in East Africa (Rwanda, Malawi) that could be replicated in West Africa.

Providing credit to increase input use has many advantages, not least of which is the flexibility it offers producers in choosing the optimal fertilizer management for their situation, depending on the production system as well as the state of soil fertility. In Benin, the *Projet de Gestion Intégrée de la Production et des Déprédateurs* (GIPD) offers a successful case of an integrated fertilizer programme which combines organic and mineral fertilizer techniques to deal with depleted soil fertility resulting from previous excessive fertilizer applications.

Increasing the use of inputs is only the first step to enhancing productivity. The latter also requires facilitating improved access to appropriate technologies and equipment by small scale farmers and small and medium enterprises. This in turn requires various interventions and supportive measures that include subsidized credit and investments for targeted productive assets and solving the land tenure constraints which block investment opportunities for small scale producers, including women, and reduce access to credit. Better access to input, equipment and technologies combined with technical and managerial training (through training centers, farmer field schools) all combine to improved returns to labor. These measures must be integrated with value chain or sectoral development strategies.

2.2 Resolving the perennial credit problem for small-scale farming: innovative solutions for staple food value chains

Access to finance by small-scale producers and value chain operators is the foundation of a well-functioning value chain and ensures steady agricultural development. For the majority of small scale producers, access

to credit for staple food production is either unavailable or comes at prohibitive interest rates. Unlocking credit and finance constraints remains a huge challenge for agrifood chain development. At the Making Finance Work for Africa (MFW4A) Conference, held in Kampala Uganda in 2011, a declaration of principles was made on enhancing financial capability in Africa. The Kampala principles provide some useful guidelines in the search for solutions. Some of the relevant principles seek to: (i) ensure legislation to remove barriers to financing agriculture operations such as warehouse receipts and contract farming, and support the emergence of viable local rural financial institutions; (ii) develop financial markets to support the enhanced capacity of financial institutions to lend and meet the market demand; (iii) strengthen farmer organizations so that the production end of agricultural value chains becomes an effective influence on agricultural finance policy-making; (iv) improve financial literacy and farmer business education, inclusive of both men and women, as well as youth; and (v) ensure a sustainable flow of information on markets, output prices, cost of inputs, and cost and conditions of finance and credit.

Innovative solutions are required for staple food crops and can involve the public sector or public-private partnerships. Some finance models that have been applied with some success to cash or export crops could also be tried with staple crops. Among these are: (i) the social lender model (which focuses on lending directly to producer organizations and small-scale businesses); (ii) direct financing of outgrower schemes where producer-buyer relations already exist; and (iii) finance schemes that involve two or three partners, including a finance institution and producer organization, with a government agency (sometimes with donor financial support) often supplying a guaranteed fund to back up the programme.

One example is Ghana's National Rural Growth Programme (NRGP), which has test-piloted a new credit system as part of the value chain development targeting industrial crops, exported fruits and vegetables, crops grown especially by women, and livestock. Under the programme, farmer groups, including those participating in outgrower schemes, can register as a company known as a Special Purpose Vehicle (or SPV). The SPV has access to commercial bank finance and can provide farmers (or outgrowers) with input credit (fertilizers, herbicides, etc.), machinery and other mechanical services, as well as training in group cohesion and coordination. The programme appears to be working, with a steady increase of participants – over 2 500 Ghanaian farmers (as of July 2012) benefit from the credit system – and with high repayment rates (91-98%).

Nigeria offers a different model to facilitate access to credit for value chains. Under the incentives-based Shared System, the government of Nigeria, through the central bank, provides incentives to commercial banks to lend to private agribusinesses by reducing their investment risks in the agricultural sector. As a result, many commercial banks in Nigeria have expanded their lending and investment activities, focusing particularly on seed production where they have been actively seeking potential partners to expand seed production and distribution.

Another promising approach to facilitate access to credit for producers in staple food value chains is the inventory credit or warrantage system. Under this system, producers stock specific quantities of surplus production (usually cereals or other easily storable crops) in a reliable warehouse, jointly managed with a financial institution. The stored crop is used as collateral in order to access credit. Once the credit is reimbursed, the producer can retrieve the production and sell it when market prices are at their seasonal peak. The warrantage system, first introduced by FAO in Niger, has since spread to several countries of the region and is being taken up by a growing number of cereal-based producer organizations. Under the European Union-funded project, All-ACP Programme for Basic Commodities in the African-Caribbean and Pacific (ACP) countries, FAO examined several producer organizations in West Africa and concluded that, while warrantage is a powerful institutional innovation for credit access, its success depends on a number of critical conditions being met, such as: (i) the presence of a local financial partner; (ii) a functioning producer organization with sufficient internal coordination capacity and sufficient storage capacity; (iii) a storable commodity subject to

predictable cyclical prices (high and lows within a season); and (iv) ability of the producer organization to fulfil contract obligations vis-a-vis the financial partner.

2.3 Enabling policies to foster inclusive agribusiness and the catalytic role of public-private partnerships

The vast majority of staple food products (cereals, roots and tubers, livestock, horticulture) serve domestic, informal markets in developing countries. Despite the expansion of supermarkets, most small farmers (60-80%) continue to market their goods through traditional informal channels and street markets.

There is a strong business case for agri-processors to source directly from small farmers, as the former can benefit from known efficiency and comparative advantage of the smallholder farmers and reliability of secured supplies. The answer depends on the levels of risk and how they are addressed. Among the risks faced by agribusiness are difficulties getting smallholders to comply with standard requirements and to fulfill commitments, as well as problems with communication and coordination. Farmers dealing directly with agribusiness typically require a higher level of negotiating capacity and better internal coordination to meet contractual obligations than they generally have; these depend on better organization and a higher degree of market and business capacity.

The transition of small-scale farmers from subsistence to commercial agriculture depends on finding ways for smallholders to move up the commercial and market integration ladder and, inversely, on opportunities for agribusiness to source more of their raw agricultural products from small-scale producers.

A particular form of supply relationship between agro-industry and small-scale producers is the outgrower scheme – a supply contractual arrangement through which private industry provides services to small farmers in the form of extension, training and inputs, in return for a supply of raw agricultural products at set prices. The outgrower scheme, found predominantly within the export-oriented value chains, is favoured by governments and development partners as a means to encourage more small-scale producers to participate in value chains. However, in practice, the outgrower scheme doesn't always work well and can result in frequent side-selling by farmers or contract-breaking on the part of the producers. This is the case for the oil palm industry in Ghana, where side-selling by farmers is rationalized as a consequence of oil palm mills raising input prices and lowering the prices offered for fresh fruit bunches without consultation or coordination with supplying farmers. The farmers often respond by selling on the open market instead, where prices are higher. This case illustrates the importance of close coordination in price negotiations between agribusiness and supplying farmers, which implies relationships that build trust and seek win-win outcomes on prices, quality and supply for both sides. Other conditions for success include merit-based selection of participating farmers and an emphasis on farmer training. The same requirement for close coordination and transparent negotiations also applies to commercial agreements between outgrower farmers and input suppliers.

Successful cases of good working linkages between agribusiness and small-scale producers also exist. Senegal offers a good example involving a dairy agriprocessor and milk suppliers from Richard Toll, east of Dakar. In this case, a privately-led initiative (Laiterie du Berger) was established to produce dairy products using milk sourced from local farms. The dairy processing unit collects, processes and sells milk in the Dakar market and offers its milk suppliers services to improve quality, as well as yield-enhancing techniques. Additionally, an NGO is involved in providing training to participating dairy farmers, focusing on capacity building not provided by the agriprocessor. However, the successful experience in this case

is linked to the localized nature of a captive dairy market with only one operating agriprocessor within the region. These conditions strongly favour a closer business relationship featuring coordination and collaboration.

Public-private partnerships for value chain development

Both the public and private sectors are essential players in the rebuilding of the region's food potential, but with different roles and objectives. Public-private partnerships can be an effective instrument for creating the synergies required to achieve competitive and inclusive value chains. There are a number of best practices to illustrate how these can work in staple food value chains. One example is from the rice value chain in Senegal, where the government, concerned about improving local rice supply, has supported the creation of a privately-led consortium to process and distribute local rice to urban markets through a network of rice importers. The consortium is composed of 13 import marketers and 6 producer organizations, plus processors. Within a short period, the company managed to improve the rice quality offered into the market; it was also working on building up rice collection and processing capacity, which requires heavy investments in processing machinery.

A second example is from Ghana, which started the Outgrower and Value Chain Fund (OVCF). Through this programme, the government aims to improve access to medium-term and long-term financing for productive investment by small-scale farmers participating in outgrower schemes. The OVCF facility brought together farmers, technical operators (processors, exporters or aggregators) and banks. Several factors have contributed to the success of the OVCF programme, including: (i) a tripartite contract arrangement (between farmers, technical operators and banks); (ii) provision of quality technical and financial services and access to information; and (iii) transparent pricing and knowledge of financing for value chain links by participating banks. A noteworthy feature of the programme is the enforcement of merit-based eligibility criteria for each of the three main categories of stakeholders.

Another successful case of a public-private partnership, also from Ghana, is the government-supported, privately-led Root and Tuber Improvement and Marketing Programme (RTIMP). The programme offers services to cassava producers and processors to enhance post-production stages. The RTIMP works with cassava producer groups and focuses on productivity-enhancing activities, such as multiplying and distributing improved planting material and supporting good practice centres, exposure visits and financial analysis of chain activities. The programme also supervises a network of small plots in which participating farmers grow improved varieties, as well as good practice centres to process cassava using standardized equipment. A noteworthy feature of the programme is that farmers are required to pay for all training services they receive. Another crucial criterion is pre-screening for producer groups to ascertain readiness before enrolment. To ensure sustainability of the programme, a business advisory committee focuses on self-financing options as part of an exit strategy when the government/donor funding support ends.

2.4 Examining the critical role of intra-regional trade in rebuilding West Africa food potential

Enhancing access to markets, whether local, regional, or international, is the basis for sustainable food value chain transformation in West Africa. Yet there is strong evidence that this region as a whole continues to undertrade, compared with its potential, with intraregional trade being particularly weak. Locally grown maize, for example, only accounted for three percent of Economic Community

of West African States (ECOWAS) imports from 2005-2009, too small a share even if doubled or tripled by informal trade. Likewise, sorghum and millet – other important staples in the region – could be intraregionally traded much more than is currently the case, since food agriprocessors (breweries, feedstock manufacturers and others) find it much easier to import sorghum or millet from outside the region than to source locally.

While informal cross-border trade does take place, and covers a range of food products (palm oil, maize, sorghum, cowpea, onions, live animals), it still constitutes relatively small quantities, which cross borders largely through a network of personalized business relations. The transaction costs of the cross-border flows are very high, as indicated in part by the large price differentials (often double or more) between production centres and urban consumption markets. These high transaction costs are largely due to lagging transport and communication infrastructures, fragmented regional markets and lack of predictable trade policies. In addition, the trading network is weak as there are very few large-scale commodity brokers (which are common in Southern Africa) who can perform the function of market regulators on a larger scale and have the flexibility to switch from one trade corridor to another and to take advantage of new business opportunities.

The real challenge for West Africa is learning how to unlock the intraregional trade potential and expand staple food markets as part of the broader strategy to rebuild West Africa food potential. This is a tall order, as it requires overcoming a number of constraints – institutional, regulatory, infrastructural and technological. Moreover, it requires a regional approach and the need to align and harmonize policy across the countries of the region. The institutional setting is provided by ECOWAS and the West African Economic and Monetary Union (UEMOA), the two regional organizations mandated to work towards closer economic integration; moreover, the strategy framework exists and is provided by the CAADP process and its associated regional agricultural strategy – namely Regional Agricultural Policy for West Africa's ECOWAS (ECOWAP) and for UEMOA¹ (Agricultural Policy of the Union). In theory, trade facilitation and market development figure prominently under the CAADP (especially Pillar II). Yet in practice, there are many hurdles that stand in the way of achieving greater integration through the free movement of people, goods and services, as well as the weak implementation of other policy instruments such as the common external tariff (CET) and the ECOWAS Trade Liberalization Scheme (ETLS).

Innovative strategies and approaches are required to overcome the hurdles facing trade facilitation and to resolve the conflicting goals among countries that seek greater economic integration while enacting divergent trade policies. Those policies are often reversible and based on narrow short-term goals; hence, they are not conducive to a favourable investment climate. Improving intraregional trade in staple foods requires, among other things, greater effort at raising awareness of the true economic costs of intraregional trade barriers. This requires better and more systematic quantifying of the economic and business costs of existing trade restrictions, and using these findings to communicate to the policy-makers about the importance of food security from the regional perspective and about the role trade can play in the process. Some initiatives have begun to quantify the trade costs. For example, ECOWAS-commissioned studies and supported by the USAID Agribusiness and Trade Promotion (ATP) project offer useful first estimates of the economic costs arising from delays along major West African trade routes and show how they add to transaction costs, making the traded products uncompetitive. Beyond political commitment, there is also a need for greater interagency coordination within countries, especially between relevant ministries (agriculture, trade, health) and internal and transborder security agencies (police, customs, etc.).

¹ West African Economic and Monetary Union, grouping together 8 countries: Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo.

Overall, to improve trade conditions within the region, a number of measures and initiatives need serious consideration. Among these are the following:

- (i) promote awareness of and adherence to trade rules, especially at the level of border officials, police officers and other control agents, who are often unaware of the correct existing regulations;
- (ii) push for stronger commitment to free trade by ensuring that national trade-related measures or policies (such as seasonal bans on exports) do not conflict with regional trade openness and commitments under the ETLs and the common external tariff (CET);
- (iii) adopt harmonized rules and regulations (e.g. sanitary and phytosanitary standards, quality standards);
- (iv) initiate measures to reduce transportation costs, which remain too high because of poor truck and road conditions and excessive regulation; and
- (v) combat corruption at checkpoints and other points of trade control.

2.5 Considering the essential role of producer organizations as a market agency in the food value chain transformation

Smallholder relations to market can be broadly divided between subsistence (30-50%), occasional marketing (20 to 30%), regularly selling to markets (3 to 15%) and purely commercial (less than 2%). The majority of small-scale farmers are not "organized" and when they do organize, they choose groups and structures, traditional or formal, which respond to their various needs, whether economic, social or even political. As farmers make the transition from subsistence farming to commercialization, the market becomes an important driver and farmers often find it necessary to aggregate in groups or organizations that can help reduce transaction costs, improve access to credit and productive assets and develop the required capacity to negotiate economic or commercial arrangements with partners (input suppliers, service providers, agriprocessors).

As stated above, producer organizations are one of the four central market agencies required for the transformation of staple food value chains (the three others being the public sector, agribusiness and finance). In almost all initiatives, schemes and programmes that require participation of farmers, producer organizations become the preferred vehicle to reach farmers and implement interventions. In much of West Africa, a large number of producer organizations and federations formed during the 1990's following the structural adjustments, the liberalization and privatization push, and the reduced role of the state in agricultural support. The national federations (like CNOP-Mali, CNOP-Guinée) played a role in representing farmers interest in policy processes. At the regional level, ROPPA (Network of farmers and agricultural producers' organizations of West Africa) emerged to play an advocacy role on behalf of farmers at the regional level and contributed to the elaboration of the regional agricultural policy ECOWAP.

Still, as a market agency, most producer organizations remain weak with limited capacity to deliver economic services to its members. The few notable exceptions (Federation Paysanne de Fouta Djallon in Guinea, Faso Jigi in Mali, UGCPA in Burina Faso) have all benefited from lengthy donor assistance that helped them improve their market performance and reach some degree of self-reliance. But the majority of producer organizations with economic or market objectives exhibit weak capacity to effectively engage the market both due to internal factors (weakly inclusive governance, limited technical and managerial capacity, weak group cohesion) as well as external constraints (lack of support from public institutions, weak/difficult business opportunities with input suppliers, difficult relations with finance/credit institutions, or weak negotiating power with agri-business partners).

These characteristics of the majority market-oriented POs are rooted in how these producer organizations are formed, by whom, and for what. Typically, producer organizations that are initiated

by governments to provide single purpose tasks tend to perform poorly when viewed as market agents. For example, in Senegal, cooperatives established by the government have only been weakly effective, as members restrict their participation to selling just enough to recoup their debts. A similar problem is observed in Nigeria, where farmer groups formed by the government remain weak because they only serve as conduits for delivering government services to farmers without expanding their capacity to become autonomous self-run institutions that can leverage existing market opportunities. In Liberia, the government and donors pushed for the formation of farmer cooperatives, but they met with limited success, as the groups sought only the acquisition of freely-provided assets and resources, creating a minimal level of cooperation. Single-purpose groups formed by agribusiness do not necessarily fare any better and may also remain fragile if their sole purpose is to facilitate the delivery of products to the agro-industry, without the accompanying measures that enable these producer groups to enhance their internal capacity to bargain effectively in the marketplace and develop viable commercial relations.

Building producer organizations that are self-run, autonomous and capable of operating independently in the marketplace requires a number of essential conditions. The first is the existence of a business or market opportunity (or opportunities) around which the producer organization can focus its strategy, interventions and organization. Next is the requirement for good internal governance and coordination, as a foundation for effective decision-making and cooperation leading to high performance. Third is the requirement that the producer organizations have members with homogeneous goals and expectations to avoid conflicts, gridlock and lack of collective action.

These are the essential minimal requirements that must be met to ensure that the producer organization can become an effective market agency. Beyond these requirements, the producer organization should aim, with time and experience, to build its capacity and credibility, first between leaders and members, and then between the organization and its technical partners (agro-industry, finance, etc.). How fast a producer organization can achieve full capacity depends very much on the enabling environment, both economic and institutional. The existence of dedicated public agencies tasked to provide strategic support to POs is an important institutional pre-requisite. Also, vis a vis private sector partners, the existence of alternative options for farmers to access inputs and to sell their products can strengthen their ability to negotiate with a particular technical partner on behalf of members and hence raise the odds for win-win outcomes for both sides.

One important requirement is that support to producer organizations must include cost-sharing by the farmers receiving the services. Not only this will strengthen the needs-based training, it will also encourage merit-based membership. Donor-funded projects, in particular, need to insist on cost sharing with beneficiary farmers and avoid providing free services that send the wrong signal to farmers and cannot be sustained beyond the project's short life span.

While there is a general consensus that market-oriented producer organizations need strengthening, there are few proven methods to apply for this purpose. One approach is to review successful experiences and draw the proper lessons from. Examples of noteworthy experiences are the Confédération Nationale des Organisations Paysannes de la Guinée (CNOP-G), Senegal's FONGS (Federation des organisations non-gouvernementales du Sénégal) and Burkina Faso's UGCPA. One can also apply the "inclusive business model" principles to diagnose constraints and propose solutions to improve the producer-buyer linkages. This method has focused on cooperatives specializing in niche and high-value marketable or exportable products. The approach can be effective in cases where an untapped value addition opportunity exists. However, the application of business principles in the case of producer organizations or cooperatives remains narrow, focusing on a single segment within a value chain taken in isolation

from broader requirements of governance, coordination and capacity to address a range of market issues faced by producers.

An alternative approach, developed by FAO, is the GAIN (Governance, Autonomy, Integration, Needs-based) methodology, which performs a complete diagnosis of a producer organization with the aim to initiate endogenous change processes that progressively transform the producer organization into a self-reliant, economically autonomous market agent. The GAIN methodology applies a participatory, iterative framework to tackle the market opportunities and the issues of internal governance and coordination and to examine potential partnerships with external economic and institutional partners. The methodology generates a road map for corrective measures to build capacity and targeted training needed to meet the identified new market opportunities, as well as the institutional and governance structure for the producer organization. The GAIN approach was successfully applied in two West African countries - Burkina Faso and Mali - plus Cameroon from Central Africa - as part of the All-ACP Programme for Basic Commodities in ACP countries

Some West African governments have begun to initiate programmes specifically designed to strengthen producer organizations, as part of their CAADP-linked support to value chain development. For example, Ghana has established a desk for farmer business organizations to build their capacity, as well as a directorate for Women in Agriculture to ensure that investment initiatives are gender-neutral. Ghana's Market-Oriented Agricultural Programme (MOAP) targets POs and is test-piloting an approach that aims to bring POs into a progressive multi-stage development process, leading to the business-ready stage. This is done through a set of incentives for the producer organizations and training programmes for members that are tailored for different stages of business readiness. However, the programme is still in the pilot stage and would need to be successfully integrated into a reformed extension service.

3. Commodity-specific priorities for a transformation of food value chains in West Africa

3.1 Export commodities

Traditional exported crops (cotton, coffee, cocoa) – *Completing the transition from state-controlled to state-supported, privately-led value chain development model*

Export-oriented value chains continue to have considerable weight in government programmes and development strategies despite the setbacks in export markets experienced since 1990s, and the collapse of the state-controlled development model. Under the new agricultural paradigm, based on state-supported, privately-led food value chains, traditional export commodities will continue to play a significant role in income generation and employment. For the most part, policy and institutional reforms are still unfolding towards a liberalized market. Under the new model, agribusiness actors and producer organizations are expected to play enhanced roles, while the public sector will shift away from direct control and towards indirect support. The state will continue to support market services (market information, research, extension, disease and quality control), enhance productivity (improved seeds and production technologies), address market failures (credit, inputs) and strengthen the legal framework for commercial transactions and business arrangements. These supportive measures,

coupled with strong incentives for producer organizations, can significantly reduce the number of intermediaries in the value chain and help farmers capture a greater share of the value added.

Non-traditional exported food (horticulture) – Increasing market opportunities and strengthening inclusiveness of small farmers

High-value horticultural export crops face two challenges: how to expand export market opportunities and how to benefit small farmers, who tend to be excluded from these high value markets. High-value export markets are an important segment within a diversified agricultural portfolio in the region. The expansion of horticultural crops in the 1990s in West Africa is a strong indication of the huge export potential in the region for a variety of tropical fruits and vegetables. Even more growth potential is possible if the local and regional markets can also be tapped. This should provide a larger basis for developing an agriprocessing fruit and vegetable industry. This, in turn, requires overcoming a number of market impediments resulting from the tightly integrated and coordinated agro-industry, often led by international food companies or global food retailers. These companies are the primary demand drivers that impose stringent standards and certification requirements to meet the demands of a high-income consumer market. Within this structure, small-scale suppliers in West Africa are easily outcompeted and tend to be excluded from the high-value markets. This results in a segmented market, in which the high end is serviced only by large-scale farms or estates, leaving small-scale farmers to produce for low-end markets where quality requirements and prices are lower.

This poses a dilemma for governments who promote these high-value export crops as pro-poor and it requires corrective action to ensure greater smallholder market participation. Studies on horticultural exports from West Africa have shown that effective and targeted interventions can include: (i) strengthening farmer cooperatives; (ii) targeting subsidized investments for qualified producer groups; and (iii) increasing incentives to diversify markets, giving greater emphasis to domestic and regional markets. An agro-industry strategy that targets local or domestic markets can serve as an important strategic stepping stone towards a more competitive agro-industry capable of expanding market penetration internationally. In addition, focusing on regional markets with less stringent standards (i.e. food traceability) can provide the space and the time to develop more inclusive markets, giving smallholder farmer groups an opportunity to develop the marketing capability to share in the value addition. Some farmer groups can also become competitive enough to compete in the international markets as well.

3.2 Staple food value chains

Staple food supply chains generally exhibit a lower degree of integration and a much broader range of marketing channels than export-oriented supply chains. Also, farmers are both producers and consumers of staple food. With low unit values, staple crops also offer lower incentives to manage risks in assuring supply and product quality and standards. Staple food value chains in West Africa face cost disadvantages when the market becomes regional and international, partly as a result of high logistical costs (e.g. for rice). Long-term competitiveness is also a concern in West Africa, as the soil mining and fertility depletion is not sustainable and returns to labour remain comparatively low.

While staple crops, especially cereals, roots and tubers, require significant upgrading of the agriprocessing capacity and better coordination strategies between farmers and agriprocessors, not

all countries are at the same stage of development. In some countries there is little post-production processing capacity – for example, Burkina Faso, which places priority on the introduction of processing technology to build up the initial processing capacity. By contrast, countries like Nigeria and Ghana have a more highly developed agriprocessing industry and therefore place greater priority on improving the price incentives and access to credit and on fostering a favourable business environment.

Staple food crops cover a wide range of products. In this section, we group six of the most important commodities from the region into four broad categories. These are:

- (i) Staple crops with huge growth potential, both regionally and internationally, which are subject to two-way trade (as imports and exports) (oil palm);
- (ii) Staples with huge production deficits and large import dependency but with large potential for expanding domestic supply (rice);
- (iii) Staples with large potential for enhanced production and productivity and great potential to feed the agro-industry, given the multiple market uses (maize, cassava); and
- (iv) Staples with large subregional coverage and critical importance for food security, but with low productivity due to policy neglect, despite a huge potential for transformation into commercial value chains (sorghum, millet).

Oil Palm value chain – Ensuring inclusiveness of small farmers and small and medium enterprises along with demand-driven sector expansion

The oil palm sector in West Africa has strong growth potential due to increasing demand, both domestically and internationally. The strong economics of scale of oil palm plantations favour large-scale investments and create a bimodal market structure where a few large-scale plantations coexist with a large number of small and medium-sized producers. Oil palm production in West Africa largely follows this bimodal market structure across the main producing countries (Cameroon, Cote d'Ivoire, Ghana, and Nigeria). The oil palm value chain is thus privately-run, with the government playing an indirect supportive role, encouraging outgrower schemes as the preferred model for smallholder inclusion. A study from Ghana showed that the outgrower scheme is leaky, with frequent side-selling (or contract-breaking) problems as participating farmers complain of little control over input (fertilizer) prices or the fresh fruit bunch prices they receive. In this case, the absence of a participatory platform to establish prices, coupled with the weak negotiating capacity of farmers (who are not organized into groups), combined with the possibility for farmers to sell on the open market, all contribute to the frequent occurrence of side-selling.

The main lesson to draw from this case is that the public can do more to correct the existing market failures and to facilitate conditions for greater transparency in the palm oil market. Among the possible interventions is to even out the playing field between large and small-sized mills by creating investment funds targeted at small and medium-sized oil palm mills and tied to commercial arrangements with small-scale producers. These investments would expand a mill's capacity, improve product quality and yields and ensure greater procurement from small-scale producers, both men and women. The second possible intervention is to allocate funds to support the autonomous creation of oil palm producer groups and encourage greater coordination capacity in order to ensure better access to credit, improve market opportunities and enhance producer groups' bargaining capacity with oil palm processors. These lessons and required responses also apply to other oil palm-producing countries, to the extent that they have the same market structure and their smallholders face the same impediments to market participation.

Rice value chain – *Improving the competitiveness and supply of local rice and reducing dependence on imports*

Among the major staple food commodities in West Africa, rice occupies a unique position. It is one of the few food commodities for which consumption has risen significantly faster than production over the past two decades, largely due to a very high rate of urbanization and low rice productivity growth, making the region increasingly and unsustainably dependent on imports. The share of rice consumption covered by domestic production has fallen from 70 percent in the mid-1990s to less than 30 percent currently. Moreover, as imported rice began to dominate consumer markets in much of the region, it became increasingly difficult for local rice to compete, which discouraged investment and further eroded the incentives to produce and supply rice to the local market.

These trends became untenable and politically unacceptable following the food crisis of 2007-2008, prompting the region's governments to rethink their reliance on food imports and shift their food security strategy towards self-sufficiency. However, such a shift requires a range of measures to raise rice productivity, as well as removing market and institutional barriers, in order to enhance the supply of local rice into the urban markets. The first responses were crisis-focused, relying mostly on fertilizer and seed subsidies, which are known to have only a short-term, limited impact. What is required is the type of incentive that can ensure a sustainable supply of rising surplus production into the urban markets and ensure expansion of local rice market shares. These incentives would include facilitating collective storage, improving rice quality and marketing, and enhancing coordination among value chain actors, given the weak rice value chain linkages that currently exist among farmers, input suppliers and rice millers.

A coherent rice development strategy must endeavour to erase the existing disincentives revealed in the case of Mali through a study on expenditures and investments in agriculture by the Organization for Economic Cooperation and Development (OECD) and FAO. The study showed that, despite heavy investments in rice (compared with other cereals), disincentives for rice production remained because critical complementary measures were missing, including initiatives to strengthen producer organizations, improve coordination among value chain actors, and harmonize import policies with domestic production targets.

Similarly, in Senegal, a country that depends even more on imported rice than Mali, the post-food crisis commitment to rice consisted of limited interventions with minimal, limited long-term impact in terms of raising the share of local rice in the domestic market, despite the post-2008 boost to rice production. Senegal's response to the crisis consisted of supporting fertilizer and seed subsidies and making substantial infrastructure investments in the River Valley region. However, the impact was minimal because marketing is not well-organized and the volumes marketed are not large, despite a boost in yields and unmet demand for the high quality rice produced. The lesson from these cases is that a coherent rice development policy must complement the needed investments in order to raise productivity. Such a policy must include measures aimed at strengthening producer organizations, improving coordination among value chain players, and harmonizing rice import policy with domestic rice supply support.

Maize value chain – *Harnessing the potential of a key feedstock for the region's agro-industry*

Maize is grown in significant quantities over large areas in most countries of West Africa. Maize is a subsistence crop that is being used increasingly as a cash crop. The potential demand growth for

maize is substantial, given its multiple market applications, especially under unrestricted regional trade. Given the low average level of fertilizer use and the limited seed distribution network, there is a large potential for productivity increase in maize. Along the value chain, maize faces great variability in price, quality and quantity, as a result of deficient market information systems, transport and infrastructure impediments and weak enforcement of legal rules and business contracts.

Addressing both the maize productivity gap and the market constraints requires coherent price and investment strategies that combine both market and institutional reforms. The following is a list of priority actions that can be undertaken (with varying levels of priority, depending on the country and on local market and structural conditions):

- (i) Support innovative credit access schemes, including public-private partnerships and warrantage, to facilitate producers gaining sustainable access to fertilizer, seeds and quality-enhancing techniques;
- (ii) Establish technology-assisted price and market information systems generated and used by value chain actors (e.g. the maize interprofession) under public-private initiatives;
- (iii) Offer subsidized investments in storage facilities to eligible producer organizations and cooperatives;
- (iv) Provide subsidized investments in small- and medium-scale upgrades of agriprocessing or milling units to enhance processing capacity and improve quality standards;
- (v) Offer publicly-funded, privately-provided and needs-based training programmes for leaders and members of eligible market-oriented producer organizations;
- (vi) Establish legal frameworks for enforcing commercial transactions and ensuring adherence to safety and quality standards and regulations;
- (vii) Establish the institutional frameworks for the creation of producer organizations, cooperatives, business networks and interprofessions to enhance value chain coordination and strengthen the linkages; and
- (viii) Support multi-stakeholder meetings to exchange information on the maize value chain, develop partnership opportunities (such as public-private partnerships) and debate policies and initiatives related to the maize sector.

Sorghum-Millet value chains – Ending policy neglect so as to enhance food security, foster agriprocessing, and promote market penetration for sorghum and millet

Sorghum and millet are two of the most critically important food security crops in the Sahel (the 15 countries comprising the CILSS (Permanent Inter-State Committee for Drought Control in the Sahel) group stretching from Senegal to Chad). Their adaptability to light soils and lower rainfall make them highly suitable for cultivation where other crops are not feasible. Over 50 percent of the Sahel population depends on sorghum and millet as the primary food source. Yet, owing to policy neglect (much of it due to bias towards commodities for exports or for domestic urban markets) and the resulting lack of incentives, these crops are typically grown with little or no input and produce low yields, an outcome compounded by lower-fertility soils. Consequently, these crops remain largely subsistence crops offering limited surplus to market and lower market penetration compared to maize or rice. As a result, sorghum and millet value chains remain underdeveloped, with little processing apart from small-scale milling.

The potential contribution of these crops to food security is substantially larger than what currently exists. The average yield for sorghum/millet throughout the region is around half a tonne per hectare and could be easily doubled or tripled with existing technologies (improved varieties and fertilizer management techniques developed over the years by the INTSORMIL project and field-tested by the Sasakawa 2000 project).

Within the Sahel countries, the lack of policy incentives and the absence of a serious development strategy for these otherwise strategic food security crops are not surprising but this urgently needs

correction. No food security strategy within the Sahel region can exclude sorghum and millet; they require priority support. Given the similar development status of these crops in many of the Sahelian countries of West Africa, a coherent sorghum and millet policy and investment programme would target the following priorities:

- (i) Create the required market, price and credit incentives needed to increase adoption of improved technologies by farmers and to improve yields;
- (ii) Promote higher marketable surplus by subsidizing investments in producer-run storage facilities to improve marketing and introduce supply and price risk-management schemes;
- (iii) Provide subsidized credit and investments for small- and medium-sized agriprocessing units through public-private partnerships in agriprocessing mills (which use sorghum and millet in animal feed, as well as processed and semi-processed food and beverage products);
- (iv) Encourage demand for sorghum and millet food products by strengthening food quality control measures and supporting improved quality packaging through subsidized investments; and
- (v) Support the emergence of strong and market-oriented producer organizations for sorghum and millet by funding training and capacity based on need, and by subsidizing investments in storage and encouraging public-private partnerships involving producer organizations, finance institutions, and agriprocessors.

Cassava value chain – Accelerating transformation from subsistence into a commercial value chain

Cassava (like maize) is also widely grown and consumed in much of West Africa and plays a major role in the region's food security. Throughout the region, cassava production is characterized by labour-intensive traditional techniques, predominantly carried out by women. Like sorghum and millet, cassava exhibits characteristics of a semi-developed value chain – namely, low marketable surplus, low labour value added, and low yields. Marketing channels are typically undeveloped (apart from small niche exports) and the cassava value chain has a low level of organization and poor linkages among players.

Like maize, cassava has a huge potential to serve as feedstock for a whole range of food, feed, and industrial products. Unlike the readily storable cereals, cassava is a tuber that is quickly perishable after harvest, which makes processing an immediate, critical post-harvest step for generating marketable products. For this reason, increasing cassava yields alone is not enough to turn the production surplus into marketable products along the value chain. Adequate post-harvest processing is a prerequisite.

Several governments of the region have initiated programmes to promote the cassava supply, especially following the 2008 food crisis. In Cameroon, an eight-year International Fund for Agricultural Development (IFAD)-funded programme on cassava (from 2004-2012) illustrates the type of unbalanced approach to commodity development in which too much effort was focused on production and yield increase, without the necessary, complementary measures in processing and marketing. Indeed, the programme succeeded in introducing higher-yielding varieties and raising production by participating farmers but there was no similar impact beyond the farmgate, as processing and marketing received very little focus and much of the added production could not properly be processed and marketed as originally planned. The initial limited processing capacity (a result of weak producer organizations and unreliable processing equipment suppliers) and the lack of reliable marketing channels for cassava products were not significantly addressed by the project. In contrast to Cameroon, Ghana initiated the RTIMP, which aimed at supporting cassava-processing enterprises and piloted initiatives to ensure that production and processing linkages are integrated. The programme is ongoing but already appears to be successful given its judicious focus on post-production processing through capacity building and incentives.

The lessons from the experiences of these country show that, given the current pre-commercial cassava development stage in much of West Africa, a coherent strategy for a competitive and inclusive cassava value chain would include the following initiatives and priorities:

- (i) Establish initiatives to improve cassava productivity through new varieties, farmer field schools and labour-saving technologies, especially those targeting women who perform the hard labour associated with field operations;
- (ii) Introduce and support small-scale processing technologies for use by functional cassava producer cooperatives; such support requires access to machinery, training and follow up; the support should be government-facilitated and, if possible, privately-delivered, involving equipment suppliers, credit providers and buyers;
- (iii) Subsidize investments to small- and medium-scale processing units and provide the required training capacity to producers and specialized processors;
- (iv) Provide subsidized credit, training and legal supervision to processing equipment suppliers;
- (v) Develop technology-assisted market and price information on cassava products covering both local and regional markets; make accessible, timely, and useful information available to producers and buyers, supported by information technology; and
- (vi) Encourage a network of cassava producers, processors and traders at national and regional levels to share best practices, coordinate markets and contribute effectively to policy formulation, industry regulation and public-private initiatives targeting cassava value chain development in the region.

4. Conclusions: Towards an accelerated transformation of food value chains in West Africa

The present chapter laid down the argument for rebuilding West Africa's food potential, identified the respective roles for the key market agencies (public, agro-industry, finance and producers), and reviewed the specific development needs of the most important value chains in the region (aside from livestock and seafood products). What implications can we draw from the study findings in support of the implementation of the ECOWAP/CAADP process and the related national programs?

Within the CAADP process and following the ECOWAS agricultural regional policy (ECOWAP), the region's countries have developed national agricultural investment plans (NAIP) which represent the programming framework for interventions and investments in the agricultural sector mobilizing both internal resources and donor assistance. These NAIPs have identified priority value chains based on their agro- ecological potential and socio- economic impact. At the regional level, ECOWAS developed its regional agricultural investment plans (RAIP) to complement the NAIPs focusing on a limited number of strategic issues relating to supply, trade, and food access, as well as the overall enabling environment for regional investments. The RAIP aims to build on the interdependencies between countries to accelerate the agricultural transformation in the region.

Among the objectives of the RAIP is "the promotion of strategic products for food security" chosen on the basis of production potential, importance and changes in populations dietary habits, and import substitution for products with large import dependency. Given these criteria, the priority commodities highlighted under the RAIP include rice, cassava, corn, livestock and meat products, as well as fish products.

In many countries of the ECOWAS region, the NAIPs' implementation has begun. There is an urgent need for supporting the implementation process and providing guidance in how best to translate the strategy framework into an effective plan of action. Moreover, as the process of finalizing NAIPs/RAIP in the region is continuing through 2015, there may also be a need to assess the impacts the NAIPs and RAIP would have had in accelerating the growth and development of the priority value chains in the region.

On this basis, what lessons and recommendations can we derive from the present study that can guide the CAADP process and accelerate the implementation of the NAIPs/RAIP in West Africa? In response, three sets of recommendations can be put forth:

- (i) The strategic need to diversify agriculture requires balancing out staple food with export-oriented value chains and the correct articulation of the criteria that can ensure its successful implementation;
- (ii) How to design a workable implementation plan for a coherent investment program under the NAIP based on the triple criteria of *Need*, *Capacity*, and *Impact* assessment
- (iii) Execution, implementation and coordination, taking into account the requirements of inclusive-governance, decentralization, and subsidiarity.

4.1 Towards a diversification strategy for value chain development

West Africa has traditionally relied on relatively few export-oriented commodities for its agricultural development (peanuts, cocoa, coffee, and cotton) while staple crops and animal products that form the bulk of population consumption needs received much less policy support. As an illustration, a close examination of the Mali government expenditure patterns in agriculture show a disproportionate share of expenditures going to few urban based food products (rice) or crops generating export earnings (cotton). Throughout the region, private investments in agri-business tend to favor few export commodities with high commercial potential (oil palm, tropical fruits). The same preferences appear evident among the privately-led initiatives for agricultural investments in Africa, such as The African (Accelerated) Agribusiness and Agro-industries Development Initiative (3ADI), Grow Africa, African Agriculture Fund, etc. Likewise, national farmer groups (federations, platforms, etc.) tend to focus largely on staple food commodities that are most grown and consumed by farmers, as they represent a large share of their source of food security, income and livelihood.

Under the ECOWAP regional agricultural policy, the ECOWAS Commission applies the "food sovereignty" criteria for selecting its strategic commodities (rice, maize, cassava, meat products, and fish) for priority investments in the region. At the country level, national governments have also defined their own set of priority value chains for priority investments under their NAIPs. Still, a diversified agricultural development requires a long term growth strategy and hence broadening the selection criteria for priority value chains for early and concentrated interventions with the high spillover potential for the rest of agriculture. Examples of key criteria to consider are:

- (i) Contribution to food and nutrition security, as measured by volumes of production, share of consumption in domestic diets, and potential for import substitution;
- (ii) Overall contribution to rural household incomes and livelihoods, as measured by the number of employed men and women in the production, processing and marketing;
- (iii) Contribution to the national economy and general budget, as measured by market value added, value of export revenues, etc.

Clearly taking these criteria into account should yield a core set of priority value chains that would necessarily differ by country. An accelerated and integrated program for developing these priority

value chains should fuel an agro-industry development with positive spillover effects on other locally important value chains that contribute to food supply or has a significant export growth potential and contributing to increased farmers' incomes (examples: cashew nut, sesame, shea butter etc).

4.2 Supporting implementation of the National Agricultural Investment Programs (NAIPs): A triple criteria assessment for an integrated investment strategy

To facilitate implementation of the NAIPs, priority actions and targeted interventions targeting the priority value chains should be formulated and developed on the basis of detailed assessment covering three primary criteria, namely:

- (i) **Need:** Actions and interventions requiring investments should be prioritized based on the value chain specific development needs as determined by agronomy, agro-ecological conditions, scope for productivity increase, and critical bottlenecks identified along the various value chain stages, including post-harvest, processing and marketing. Such a need assessment – with input from all the key market agents- should identify not only the critical areas for interventions, but also the optimal sequencing for maximum impact
- (ii) **Capacity:** This criterion relates to evaluating available capacity, whether human (technical, including research and extension, managerial including planning and monitoring), financial (from all possible funding sources) or infrastructural (storage, laboratories for quality testing, communication systems, roads and transportation). The capacity assessment should also be closely linked to the need assessment outcomes and be formulated at the value chain level, when necessary
- (iii) **Impact:** The impact assessment criterion evaluates the scope for market expansion (such as irrigation potential, readily achievable yield improvements, degree of trade substitution, etc.), potential income generation and employment addition.

These assessments should be multi-stakeholder led and guided by a technical team with the required expertise to guide weighting options and to tackle measurement issues and option tradeoffs.

Beyond the value chain-specific options and identified interventions, an integrated investment strategy must also include a number of critical cross cutting needs that must be established or supported. These crosscutting actions may vary across countries depending on the development stage and the institutional environment of the country, and can include, among others:

- (i) Creation of educational and training institutes to provide the necessary professional and technical training to farmer leaders, technical agents and commodity experts in production technique, processing, marketing, finance etc.;
- (ii) Agencies or institutions dedicated to capacity development for producer organizations and their leaders including women;
- (iii) National centers for value chain risk assessments, risk management, and financial education;
- (iv) Observatories to monitor and develop trade information rules and coordination, among others.

4.3 Coordinating the strategy implementation

The implementation of the NAIP and its eventual success will depend largely on the degree of participation of the four key market agencies (public, agribusiness, finance, producers) and the importance given to participatory governance and to effective coordination. The success of inclusive governance in the process of NAIP implementation requires that full account is given to the goals and strategies and needs of each of the four key market agencies from which synergies, complementarities

and win-win options are derived. To be effective, the participatory governance must intervene at the stage of formulation and development of priority actions and interventions (described in 4.2 above). Also, for effective coordination and inclusive participation, it is necessary to establish a transparent mechanism for sharing data and information between the key actors to allow them to formulate clearly-articulated positions, an essential step that would ensure that all players are actively contributing to the elaboration of the CAADP-inspired national investment strategies. This, in turn, requires strengthening the internal organization and coordination of the private actors, from the agro-industry or from POs, to become effective.

More critical is the degree of readiness of producer organizations and related meta-structures (platforms, regional organizations) to contribute credibly to the process. A particularly relevant institution that could play a critical catalytic role in the process is the value chain-specific interprofessional organization. Many countries of West Africa are at various stages of legal and institutional reforms that encourage the emergence of the value chain interprofessions. However, the credibility of these institutions or their performance depends largely on the strength and the capacity of the member associations.

As stated above, inclusive governance is essential for successful value chain development through the implementation of NAIPs. Successful initiatives and best practices from the region can demonstrate the critical importance of good governance in such processes. A good example is provided by Ghana's Medium Term Agriculture Sector Investment Plan (METASIP), which illustrates the type of inclusive sector strategy development and inclusive governance applied to priority commodity chain investments. The programme follows a sector-wide approach, pursuing broad-ranging interagency consultations for the design, supervision, and implementation of its activities, all guided by a Steering Committee whose membership includes relevant government agencies, ministries, and producer organizations. A noteworthy element of the programme is the attention given to enhancing the capacity of producer organizations to strengthen their bargaining power and enable them to link up with regional groups.

An example of multistakeholder coordination for value chain development at the local level is provided by Ghana's NRGp programme, which set up the District Value Chain Committee (DVCC) that includes producer organizations, financial institutions, agro-input dealers and marketing companies, not only at national but also at local (district) level. Such location-specific forums can be more effective when they are focused on specific value addition issues with input from participating parties to share information and build partnerships. The DVCC coordination has ensured continued mobilization of new funding and has brought new participants into the NRGp programme, especially local banks, whose number increased from 2 in 2009 to 24 in 2012.

In general, the blueprint described above can serve as a guide to facilitate the implementation of the CAADP-derived national agricultural investment plans in West Africa. The proposed outline is also very timely given that over half the region's countries have just embarked on implementing the national strategies developed over the last several years. It is hoped that the lessons learned from the case studies summarized in this chapter and detailed in this volume can provide the necessary input for accelerating the process.

General introduction and book content

Aziz ELBEHRI

In the aftermath of the food crisis of 2007-2008, a World Summit on Food Security was organized by the Food and Agriculture Organization of the United Nations (FAO) in November 2009. Among the summit conclusions was the affirmation that greater efforts must be deployed to ensure that markets work for, and are more inclusive of, small-scale producers, especially in developing countries. This conclusion arose from the recognition that, despite the surge in food prices, small farmers in developing countries were not able to benefit by responding with greater food supply. The expected supply response to rising prices did not occur. A myriad of public and private market failures stood in the way and became glaringly evident following the food crisis.

For West Africa in particular, this episode reinforced the urgent need to make a major correction in food policy and redirect attention towards staple food commodities, which had been long neglected in favour of a few export commodities. While this shift in focus can be traced to the establishment of the Millennium Development Goals (MDGs) and the Comprehensive African Agricultural Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD), it was never followed by the needed boost in new investments in agriculture. There was a noticeable change in the trends in agriculture investments, which had been declining since the mid-1980s. The development aid and investments that followed the post-2000 MDGs targeted mostly non-agriculture goals (health, education, girls' schooling, etc.) and focused on transportation, infrastructure or aid for trade, which were thought to be more effective in boosting agricultural productivity than direct investments.

It took the food price crisis of 2007-2008 to jolt both governments and development partners into action. A new consensus quickly emerged, calling for substantial investments in agriculture and rural development to enhance agricultural productivity in order to meet the challenge of food security – an area that became, once again, an international top priority.

In this context, West African governments responded to the heightened concerns over food insecurity and disruptions to food trade flows by turning their focus to the long-neglected basic food commodities. Supported by donors and buoyed by renewed interest in agricultural investments, a number of national initiatives were launched to stimulate the domestic production of staple foods such as rice, maize and cassava. More than merely a shift of direction, these developments called for a major paradigm shift in agricultural development, away from what had traditionally been a narrow focus on a few export commodities (cotton, cocoa, coffee, groundnut) and towards embracing a more diversified approach to agricultural development.

However, in practice, these responses took the form of the usual interventionist tools, such as direct subsidies to inputs (for a quick boost to production) and, when possible, investments in expanded irrigation schemes. On the demand side, many governments also responded by lowering trade barriers to facilitate more imports. Yet these measures did not add up to a comprehensive or coherent strategy aimed at rebuilding long-term food potential. These national initiatives lacked a fully-integrated policy response aimed at improving competitiveness through cost-cutting investments and incentives designed to promote effective and inclusive food value chains.

It is widely recognized among development specialists that staple food development models require, among other things, the following prerequisites: (i) a coherent investment framework targeting staple

food commodities; (ii) consideration of the whole value chain approach to development, covering production and post-production stages; and (iii) an awareness that achieving both competitiveness and inclusiveness requires the active involvement of public agencies, private entrepreneurs and producers represented by strong organizations.

In this context, staple food commodity models differ significantly from export-focused cash crop models. Staple food crop production presents a number of distinguishing features, including the involvement of a large number of small, highly heterogeneous farmers; women often play an important direct role in the production, trading and small-scale agroprocessing. Farmers producing staple foods also tend to face greater difficulty accessing inputs, are exposed to greater risks (in production, marketing and prices) and have limited market access for their products. On the demand side, staple food commodities can have multiple market outlets, including local, national or regional markets. Moreover, production of staple crops – especially the cereals, roots and tubers that predominate in West Africa – requires a significant upgrading of the agroprocessing capacity, including better coordination strategies between farmers and agroprocessors.

Downstream on the value chain, development of inclusive staple food value chains requires tackling problems related to the general business environment, weak or inefficient contract enforcement, infrastructure deficits and dissemination of agricultural research. In addition, building long-term competitiveness in staple foods is specifically problematic in West Africa, as soil fertility is a serious and worsening problem, while returns to labour are relatively low. Yet given the low productivity and competitiveness of staple foods in general, there is still a huge scope for improvement and for further reductions in unit costs. Clearly a case for active public and private engagement is evident, but the key question is how and under what institutional set-up should this engagement be established, given the specificities of staple food systems.

The chapters of this book represent an empirical and normative contribution to the development framework for value chain models appropriate for West Africa and its dominant commodities. The book is regional in scope and covers the 15 West African countries plus Cameroon and Chad (part of the central Africa, CEMAC region). The value chain case studies covered in the book are broad-based and fairly representative of the major crop systems in the region, including traditional export crops (cotton, cocoa, groundnut), high-value export commodities (horticulture, mango, banana, pineapple), staple food crops (palm oil, rice, maize, sorghum, millet, cassava) and milk. The country case studies include: Burkina Faso (maize, cotton, mango); Cameroon (cocoa, cassava); Cote d'Ivoire (cotton, cocoa, banana); Ghana (cassava, mango, oil palm, pineapple); Mali (cotton, rice, sorghum, millet); and Senegal (rice, groundnut, horticulture, milk).

Book content

The book is divided into two parts. Part I provides analyses of market, policy and institutional drivers, and issues relating to food commodity chains, with a particular focus on staple foods within West Africa. Part II contains a large number of case studies treating specific value chains and countries or groups of countries.

Part I begins with an introductory **Chapter 1**, by *Elbehri, Kaminski, Koroma, lafrate and Benali*, that describes trends and indicators of food demand and supply in West Africa. On the demand side, the chapter describes trends in population and urbanization and the food consumption patterns most prevalent in the region. On the supply side, agro-ecological systems, as well as the major crops and livestock products, are described in terms of importance, distribution and productivity levels. Development indicators, such as infrastructure, regulation, research and development (R&D), foreign

direct investments (FDI) and trade flows, are described and show that the region as a whole lags behind other regions, even compared to other parts of Africa. This precarious situation has roots in the agricultural development pathways followed by most countries of the region since gaining their independence, which can be summed up as a narrow specialization in a few raw commodity exports with relatively little spillover effect on the broader agricultural sector or the national economy.

This last point is taken up in **Chapter 2**, by *Elbehri and Benali*, which also sets out the essential thesis of the book, namely the need for West Africa to broaden its agricultural and commodity development strategy beyond export crops and redirect the emphasis towards staple food crops as well. In this chapter, the authors provide an analysis based on a historical comparison of different commodity development models. The three groups of commodities compared in the paper are: a) state-controlled traditional export commodity models (cocoa, cotton, coffee, groundnut), which dominated much of West African agriculture starting from the colonial period, continuing past independence and up to the 1980s; b) private agribusiness-dominated, high-value, non-traditional export commodities; and c) staple food models, which began to draw government attention after 2000 with the establishment of the MDGs, and more urgently following the 2007-2008 food crisis. Export commodity models represented the continuation of West Africa's colonial heritage and showed the limits and the built-in inefficiencies of a state-controlled, commodity-run system. Throughout the region, these export models experienced serious implosions by the early 1990s. The non-traditional, high-value export commodity model (which took off during the 1990s) coincided with post-structural adjustments, state retreat from agriculture, and the rise of both agrifood systems consolidation and the emergence of global value chains (best illustrated by the development of food supermarkets). This privately led value chain model offered a sharp contrast to the original state-run model and showed the effects of privately led emphasis on efficiency and competitiveness. However, this was often at the expense of inclusiveness, as small-scale farmers found themselves shut out of these value chains because they were less able to compete with more resource-endowed producers or downstream value chain actors (buyers) with greater market power. Lessons from these two export commodity models were drawn for the staple food value chains, serving domestic and export markets equally. The chapter concludes with an outline of a staple food development model, involving multiple actors – state governments, private agroprocessors, producers and credit suppliers – all playing critical roles.

Chapter 3, by *Soule*, and **Chapter 4**, by *Achancho*, review the national investment strategies for staple food value chains in West and Central Africa, respectively. In Chapter 3, the author describes the strategy development processes and country priorities and evaluates their strengths and shortcomings in light of each country's capacities and stated development objectives. Next, the author reviews the Economic Community of West African States (ECOWAS) regional investment programme for promoting strategic products and examines its coherence with national investment strategies. Chapter 4 introduces the current agricultural policy developments of the Central African region, analysing in greater detail the case of Cameroon. The author notes that, despite a favourable attitude towards agriculture recently, the Cameroon staple food policies generally lack a coherent approach to value chain development, with processing and marketing being more weakly addressed in existing programmes. Equally lacking is a set of adapted credit and finance schemes to meet value chain development needs.

Chapter 5, by *Mas Aparisi, Balié, Diallo, Komorowska, and Keita*, provides a detailed analysis of Mali's country sector policy by examining its national agricultural expenditures. The study, which is part of the Monitoring African Food and Agricultural Policies (MAFAP) project, used national expenditure data from 2005 to 2010 and quantified the incentives and disincentives for agricultural production. This study illustrates how the outcomes of public decisions on incentives may actually diverge from the stated goals in support of food value chains. The authors found that, during the study period, public expenditures (of which 70 percent are from donors) have heavily favoured grains, especially rice, with a disproportionate

amount going to input subsidies, and much less going to research and extension services – the types of investments widely recognized to have higher payoffs in terms of improved productivity. Expenditure patterns also show bias towards some export commodities (e.g. cotton) while import substitutes receive substantial disincentives. Following the food crisis, incentives for thinly traded commodities (maize, millet and sorghum) worsened, as the government encouraged imports (especially rice), which disadvantaged producers. The study vividly illustrates the lack of policy coherence between the declared aim of boosting production and contradictory price policies that discourage domestic supply. Despite heavy public expenditures on rice, parallel policies facilitating imports benefited consumers but penalized producers and wholesalers who did not benefit as they should have from high international prices. Studies like these can have a huge impact on policy design and advance our understanding of the widely recognized but ill-defined incoherence between domestic and trade food policies.

Chapter 6, by *Nwuneli, Diaw, Kwadzokpo and Elbehri*, moves the focus away from the public sphere and into private agroprocessing. In this chapter, the authors use several case studies from West Africa to tackle the questions of how to motivate small and medium-sized agribusinesses to develop food value chains from the home market, and how to include smallholders in the process. For both questions, the authors argue that critical policy support is needed to ensure the objectives. Also, government-supported investment programmes must be inclusive of the small and medium-sized local enterprises that process locally produced food and contribute to employment. Such measures would have strong implications for trade policies, requiring harmonization with domestic support measures aimed at stimulating domestic food supply. Business opportunities for working with smallholders would require that participating producers and their organizations be market-oriented and selected on a system based on merit and on the ability to deliver on contractual agreements. Successful partnerships between smallholders and agro-industry require addressing various risks related to the difficulty of complying with standards and traceability, issues of trust and loyalty (e.g. side-selling under outgrower schemes) and issues of communication and coordination. In the end, successful sourcing by agribusinesses from smallholders hinges on the latter being properly organized, with demonstrated credibility and with sufficient skills to engage in business, trade and economic activities on behalf of the organization's members. Policy support for market institutions is a critical element in the process.

Chapter 7, by *Elbehri, Lee, Hirsch and Benali*, delves into the central issue of producer organizations as market agents and explores how to make them critical players contributing to development of an inclusive food value chain. Although the need for strengthening producer organizations is often cited in commodity development analyses, there are few effective approaches that demonstrate how best to transform producer associations or groups into credible economic agents and reliable business partners. In this chapter, the authors describe a methodology called GAIN (Governance, Autonomy, Integration, Needs-based) and present both a diagnostic tool and a transformation pathway to facilitate smallholder progressive market participation and build the capacity for smallholders to become effective, credible players in the marketplace. The GAIN methodology follows an iterative approach, combining an internal "strategic" assessment of the organization with an evaluation of opportunities for partnership with its immediate potential economic and institutional partners, and derives a road map for economic self-empowerment. The methodology was successfully applied to several producer organizations in West Africa, specifically in Burkina Faso, Cameroon and Mali. The authors conclude that the GAIN methodology is flexible and can be adapted to various organizational situations and degrees of complexity and can be scaled up to national level and used as part of policy instrument and institutional reforms.

Part II of the book offers a broad range of the value chain case studies, describing traditional export commodities: cocoa and cotton (Burkina Faso, Cote d'Ivoire, Mali); non-traditional, high-value export crops: horticulture (Senegal) and mangoes (Benin, Burkina Faso, Ghana); import-export staples: oil palm

(Ghana); highly-imported crops: rice (Mali, Senegal); and lightly-traded staple crops: maize (Burkina Faso), sorghum and millet (Mali) and cassava (Cameroon).

Chapter 8, by *Abbott*, provides a detailed analysis of cocoa and cotton sectors, drawing from the author's own research in Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Mali and Nigeria. The paper is broad-ranging and covers policy processes, institutional reforms and market drivers and how these affect small farmer incomes within the cocoa and cotton sectors. The author argues that raising incomes for small farmers in these export-based commodities could be achieved by "shortening the marketing chain", thus providing farmers with a greater share of the value added in final consumer products. This can be done by increasing the market power of farmers through strengthening farmer organizations and correcting market failures along the value chain that influence credit, inputs, quality and information. Moreover, the author delves extensively into institutions and policy options aimed at raising smallholder farmer income, particularly as reforms change existing value chains. Addressing market failures would require recognizing geographic and agronomic specialization, scale economies and spillovers to other markets. The author places greater emphasis on the policy regimes that foster market institutional development, including the provision of public goods (market information, research, extension, disease control) and creation of a legal framework for private trade of commodities (such as a system of warehouse receipts). However, the author concludes that, given constraints on marketing interventions, much greater gains to small farmer incomes could be achieved by enhancing productivity.

Chapter 9, by *Swinnen, Colen and Maertens*, tackles the development of high-value non-traditional horticultural export crops in West Africa and addresses obstacles to smallholder market participation. The paper describes horticultural commodities, drawing from various case studies in West Africa, with a particular focus on French beans and industrial tomatoes from Senegal. Horticultural trade growth has expanded since the 1990s from various African countries, even though West Africa as a region has lagged behind other regions of the continent. Smallholder market participation varies widely across horticultural crops. Among the key drivers are the consolidation of food processing and the rise of private market standards, which generally tend to reduce the participation of smallholders in these markets. The authors stress the positive impacts of horticultural crop export on participating farmers' incomes and on employment for local rural labour; however, these impacts are dwarfed by the general trend of smallholder exclusion as these producers are outcompeted in the vertically- integrated horticultural value chain. These outcomes somewhat weaken the government argument that promoting high-value export crops is a pro-poor policy. While there are explicit attempts to encourage product sourcing from smallholders by promoting contract farming, these are essentially private transactions subject to market forces (opportunities and risks). One often repeated solution is to promote sustainable partnerships between producer organizations and agroprocessors and buyers. Yet this, too, requires innovative approaches and hinges on the existence of strong and credible producer organizations. Moreover, the empowerment of farmers and their ability to become effective players depends on having alternative options to access inputs and to sell products. Hence, diversification of options for farmers in input and output markets is considered to be a key prerequisite for greater inclusion.

Chapter 10, by *Van Melle and Buschmann*, examines mango value chains under different business models surveyed from three countries: Benin, Burkina Faso and Ghana. The authors compare three models with respect to smallholder market participation: a) mangoes for local markets; b) processed mangoes for urban markets; and c) mangoes under intensive contractual arrangements. Survey results show that smallholder market inclusion depends on: a) product quality positively linked with the presence of fixed buyers, which would offer better incentives to control the highly prevalent fruit fly; b) price negotiation ability for farmers, which is lower for farmers in remote areas, given the perishability of mangoes; c) addressing transaction costs arising from farm location remoteness, bad roads and poor transport quality, and high post-harvest losses. Comparing the different models, the study finds

that, for the processed mangoes for urban markets, a higher level of cooperation among farmers has improved smallholder business performance, inducing higher net investments. Ghana, which has a relatively better business environment, showed a higher net investment index compared with Burkina Faso. Under the intensive contractual model, smallholder business performance and market efficiency also improved but net investments were lower than in the previous case because of dependency on the lead firm and the weaker position of the autonomous farmers. Here, too, stronger cooperation among farmers could reduce this constraint. The authors conclude that institutional and policy support for smallholders to enhance market participation must emphasize: a) strengthening farmer cooperatives; b) providing external support through subsidized investments; and c) increasing incentives to target domestic and regional markets, as pursuing export markets may not always be the best business option. While export markets are targeted because of their higher prices, they may also exhibit high costs and risks and low competitive advantage.

Chapter 11, by *Ofori-Budu and Sarpong*, provides an in-depth assessment of the oil palm industry in Ghana and examines the conditions under which smallholder-inclusive oil palm expansion could be achieved. The oil palm sector, driven by strong demand both domestically and internationally, is expanding in several West African countries. In the case of Ghana, the authors compare three key supply models for oil palm: a) fully integrated agro-industry companies; b) processing companies that source from small-scale producers via outgrower schemes; and c) small-scale independent producers. Noting that the current oil palm production expansion in Ghana is driven by large-scale agro-industry, the authors explore ways in which small-scale producers could also participate in the process. The authors also examine the current policies and investment strategies, as well as the types of existing contractual arrangements between processors and producers. The authors conclude that the key to improved smallholder inclusiveness lies in strengthening the cost competitiveness of small-scale oil palm processors. The authors also point out the problems with outgrower schemes, due in part to weak management and poor coordination that result in side-selling (selling outside contracts). This issue undercuts support from government and development partners (e.g. World Bank) for outgrower schemes as a way to ensure small-scale producer participation in a development programme led by large private agroprocessors. One solution to remedy the limitation of the outgrower scheme is to tackle the tendency of producers to operate individually. This will require incentives to encourage the emergence of organized groups of producers who can improve relations with input suppliers, enhance product output and strengthen price bargaining power with agroprocessing mills. The authors conclude that the optimal strategy to promote development of the oil palm sector requires appropriate policy support measures that target small- and medium-scale processors as key intermediary agents between small-scale producers and the rest of the oil palm value chain. Policy support should also include measures and incentives to strengthen market-ready producer organizations.

The next two chapters address the rice value chain in West Africa. **Chapter 12**, by *Colen, Demont and Swinnen*, examines rice in Senegal and evaluates the recent government initiative to boost rice production and self-sufficiency in the aftermath of the 2007-2008 food crisis. Rice in Senegal, as in much of West Africa, is a heavily imported commodity as demand far outpaces local production. Because urban consumers have acquired a strong preference for rice (mostly broken type), the government has long pursued a liberalized import trade regime which conflicts with the government efforts towards boosting domestic production. Another challenge facing the domestic rice market in Senegal is how to successfully link smallholder rice producers with large urban markets. At stake is the need to increase marketable surplus, as well as to improve rice quality to conform to urban consumer standards. The authors examine the causes of the low penetration of local rice into urban markets, and find that rice supply is constrained by the lack of fully functioning fertilizer and seed markets. Among the suggested remedies is to encourage new types of farmer cooperatives that can collectively act to reduce transaction costs, improve access to credit and enhance market penetration. Current producer organizations exhibit

low performance, due in part to the heterogeneity of their members, which limits collective actions such as negotiating marketing credit or developing long-term relationships or agreements with buyers/traders. Another key obstacle facing domestic rice producers is the urban consumers' perception that domestic rice is of low quality. Moreover, industrial rice millers lack sufficient working capital to purchase paddy rice and have very limited access to commercialization credit. Overall, lack of coordination between the different actors, combined with the dominant proportion of small transaction volumes, significantly reduces marketing margins for local rice and also reduces incentives for investments to improve the supply of local rice to urban consumers. The food crisis of 2007-2008 did push rice importers to turn to local rice, but the above-cited obstacles need to be resolved to unlock the potential of the domestic rice market.

Chapter 13, by *N'krumah, Elbehri and Legret*, examines the state of the rice value chain in Mali, in a post-food crisis context. In Mali, rice is the third most important commodity in value terms, after livestock and cotton. Rice production potential in Mali is large compared with neighbouring countries because of the availability of untapped irrigable land. Moreover, consumer preferences for rice in Mali are hugely in favour of local varieties. The rice sector is generally competitive but there are still huge gaps in rice productivity and more improvements are needed to remove various marketing constraints. Among the critical measures needed to improve domestic supply are the expansion of irrigation schemes (through public-private investment partnerships), better fertilizer distribution, and expanded adoption of the improved variety, NERICA ("New Rice for Africa"). Institutional reforms are critically needed; these include promoting professional producer organizations capable of facilitating access to credit (in part through the practice of warrantage), managing local irrigation schemes and providing extension services (using trained relay farmers). To improve marketing, it will be necessary to improve the quality of paddy rice and strengthen the agricultural information dissemination systems. On the policy side, to date the state has been involved primarily through input subsidization and investments to expand irrigated areas. However, strengthening producer organizations, enhancing coordination among the value chain actors and harmonizing import policies with domestic rice support initiatives are among the key missing links awaiting a coherent and inclusive value chain development strategy for rice in Mali.

Chapter 14, by *Kaminski, Elbehri and Zoma*, examines the maize value chain in Burkina Faso. In West Africa, maize is hugely important for agricultural transformation, intraregional trade integration and food security. Maize can serve multiple market outlets (food, feed and industrial applications) with significant opportunities for expansion and agroprocessing development. In the case of Burkina Faso, the authors examine the key obstacles facing maize value chain development and review the incentives required to transform maize from a predominantly self-consumed crop into a cash commodity serving the needs of several growing market outlets (processed food, animal feed, breweries). Driven by strong and multiple demand sources, incentives do exist for greater uptake of productivity techniques (fertilizers, seeds) and improved maize supply quality (including post-harvest). However, the maize sector continues to be hampered by multiple market and institutional failures. On the marketing side, maize value chain actors confront large seasonal price variability and variation in supply and quality. Institutional obstacles include the lack of an effective legal system and weak commercial and market transactions, all of which limit the growth potential for the agroprocessing sector. Institutional-type reforms include support to credit schemes and incentives such as subsidizing collective storage for use in inventory credit (warrantage). As was pointed out for other commodities, successful institutional reforms hinge on the emergence of credible and business-oriented producer organizations able to mediate between producers and credit institutions to facilitate adoption of new technologies and to perform collective purchases and sales. Maize trade within West Africa is much lower than its potential. However, improving maize intraregional trade requires a better understanding of the economic and business costs of current barriers to trade, as well as better communication with policy-makers about the magnitude of the resulting costs to national food security. Policy-makers also need to be convinced that removing these barriers can generate benefits

far greater (and more lasting) than the short-term benefits that result from blocking trade based on narrow temporary concerns about food insecurity within the national borders.

Chapter 15, by *Kaminski, Elbehri and Samake*, provides an analysis of sorghum and millet in Mali. These two crops are among the most important commodities for food security for the majority of populations throughout the Sahel region. Yet these crops have by and large been among the most neglected, with very little state or policy support despite their huge importance. The widespread cultivation of sorghum and millet throughout the Sahel arises from their adaptation to the prevalent types of soils in the region (deep and light-textured, with high water storage capacity), enabling sorghum and millet crops to produce even under lower rainfall conditions. However, these same soils exhibit low fertility – an endemic problem, requiring special fertility-enhancing programmes to improve productivity. By and large, sorghum and millet exhibit very low yields (which could easily be doubled, even with readily available technologies) and most of the production is used for self-consumption, with highly variable marketable surplus. Consequently, sorghum and millet value chains remain relatively undeveloped and thinly-traded and experience little processing apart from small-scale milling. Policy support to improve the productivity of these crops has been virtually absent, apart from the notable U.S.-funded research programme INTSORMIL (International Sorghum and Millet Collaborative Research Support Program), which developed improved crop varieties and tested fertilizer and other management techniques specific to sorghum and millet for the Sahel. Yet these technology innovations have not been taken up by farmers due to the absence of price and market incentives. The absence of policy support for these crops is puzzling in light of their importance for national food security. A coherent and supportive sorghum and millet policy and investment programme should target the following priorities: a) providing price and credit incentives to encourage higher input uptake and include better-adapted varieties to boost yields; b) promoting greater marketable surplus by subsidizing producer-run storage facilities that are able to improve marketing and to manage supply and price risks; c) encouraging medium-sized agroprocessors through subsidized credit and investments and promoting public-private partnerships for agroprocessing investments to stimulate demand (sorghum- and millet-based brewery uses, animal feed, and processed and semi-processed food products); d) encouraging demand for sorghum- and millet-derived food products by strengthening food quality control measures and supporting improved quality packaging (especially targeting fast-growing urban markets); and e) supporting the emergence of qualified producer organizations and cooperatives through targeted subsidized investments and training and by building technical and managerial capacity for leaders to help them improve their market participation.

The final **Chapter 16**, by *Emmanuel*, reviews the cassava value chain in Cameroon. Cassava, like maize, is potentially a very important commodity in West Africa (south of the Sahel) for agricultural transformation and food security. In Cameroon, cassava is the most consumed staple food (representing 20 percent of cultivated land and 46 percent of national food crop production). Production is largely labour-intensive, using traditional techniques that are mostly handled by women. This crop is beset by the same types of bottlenecks found in other underdeveloped value chains: low yields; unavailability of improved varieties for better/more efficient processing; inconsistent supplies of cassava by-products; difficult market access/significant market access constraints; and low level of value chain organization. The chapter reviews a national programme to boost cassava production that began in 2004. The programme managed to raise yields significantly for participating farmers, due to the introduction of new and better-yielding varieties. However, the programme faced serious constraints in processing and marketing, revealing policy and institutional weaknesses along the cassava value chain. Because of the rapid perishability of cassava, serious logistical and quality constraints remain to be resolved. One important step is to address post-production handling by targeting semi-industrial processing in order to unlock the cassava supply potential and open up the multiple marketing outlets to stimulate both demand and supply of this versatile commodity. Correcting for marketing problems would require, among other things, the development of customized market information systems and the provision of incentives to producer organizations to engage in economic activities, secure access to credit, improve small-scale cassava processing and develop more efficient marketing options.

The food crisis of 2007 - 2008 was a turning point in world agriculture. In West Africa, in particular, this episode sparked a greater commitment on the part of governments to pursue policies to rebuild the food production potential, especially of staple foods, long neglected in favor of a few products for export. This necessitates a new development model that redefines the roles of the public sector, the food industry and producer organizations in the promotion of competitive and smallholder-inclusive food value chains.

This book presents a thorough analysis of food value chain policies, past and present, in West Africa. The book examines detailed value chain case studies in several countries, covering both export commodities (cocoa, cotton, mangoes, horticulture) and staple food (palm oil, rice, maize, sorghum, millet and cassava). The book also describes a large number of public and private initiatives and contains many thematic analyses on the private food industry and producer organizations and their critical roles as agents of the market.

This book fills an important gap and makes a valuable contribution to the literature on the development of value chains of basic foodstuffs in West Africa. As such, the book can serve as a resource for information on good practices and for policy guidance, especially at a time when many countries in the region have embarked on implementing their national agricultural strategies derived from the CAADP program.

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