



CHAPTER 1

Introduction

Chakib Jenane, John M. Ulimwengu, and Getaw Tadesse

Introduction

Overall, the economic transformation process requires both diversification and sophistication (specialization) of a country's production system. Indeed, countries that undergo successful diversification and sophistication are more likely to achieve transformative development goals. In Africa, food systems are transforming, with value chains becoming more complex and purchased, processed, perishable, and high-value food products accounting for larger shares of consumers' diets (Tschirley et al. 2015a; Tschirley et al. 2015b). The midstream segments of agricultural value chains are increasing in importance in response to demand from urban markets for both greater volumes of food and greater value added (Reardon et al. 2015). Africa's agrifood processing sector is central to these changes, and growth and development of the sector will help to determine whether the burgeoning demand from urban food markets will be met through local production or through increases in Africa's already high levels of imports from outside the continent. The processing sector is the conduit through which smallholder farmers reach consumers, and as such it plays an important role in increasing income opportunities for farmers as well as creating employment opportunities along food value chains.

The United Nations Food Systems Summit (UNFSS) held in September 2021 underscored the need to apply a systems perspective to questions of agricultural and rural development and food and nutrition security, with attention to the range of interlinked processes and actors involved in food production, value addition, and consumption. Greater focus on midstream value chain segments is essential to advancing overall food system productivity and inclusivity, given their impacts on actors throughout the food system. Agrifood processing in particular is a key sector for value addition, and has the potential to smooth seasonal price and supply fluctuations and increase market stability for both producers and consumers, diversify markets for farm products, and reduce postharvest losses (Malabo Montpellier Panel 2021). In Africa, food processing has been described as the "missing link" of the continent's food systems (Halvorson 2017) due to its insufficient capacity to effectively channel strong urban demand for processed food to producers.

The African Union's 2014 Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods

recognizes the important role of agrifood processing and other forms of agribusiness in achieving key agricultural and food systems goals. Commitment 4 of the Declaration calls for halving poverty by 2025 through inclusive agricultural growth and transformation, including by creating remunerative opportunities in agricultural value chains and supporting the participation of women and youth in agribusiness. Advances in the processing sector can also contribute to progress toward other goals, notably the Malabo Declaration commitments to end hunger and boost intra-African agricultural trade. Processing both facilitates trade by generating products that are easier to transport than raw materials and creates additional opportunities for trade by permitting greater product differentiation. The processing sector also plays an important role in nutrition as it allows nutritious foods to reach consumers far from production areas, but it can also increase the availability of unhealthy or poor quality food products. The technologies and practices of processing firms can alternatively protect, enhance, or damage the nutritional content of the foods they produce.

Despite the key role of the agrifood processing sector in advancing food system and economic transformation and its importance to achieving many of the Malabo Declaration commitments, there is a relative lack of research evidence on the current status and performance of the sector and strategies to enhance its competitiveness. The *2022 Annual Trends and Outlook Report* (ATOR) focuses on the agrifood processing sector and strategies to maximize its contribution to achieving sustainable healthy diets for all. More explicitly, the 2022 ATOR addresses issues including growth, potential, and constraints in Africa's agrifood processing sector; dynamics and trends in key processing subsectors; and policies and investments required to help processing sector firms overcome challenges, increase performance and competitiveness, and enhance the contribution of the sector to broader growth and development. In this introductory chapter, we provide a brief review of performance and constraints to growth in the processing sector before summarizing the report's chapters.

Growth in Africa's Agrifood Processing Sector

Africa is urbanizing rapidly. About 41.2 percent of the continent's population was estimated to reside in urban areas in 2015, and this share is projected to rise to 48.4 percent by 2030 and 59.9 percent by 2050 (UNDESA 2018). Incomes have

also risen significantly since the early 2000s. Prior to the COVID-19 pandemic, steady economic growth over almost two decades had reduced the prevalence of poverty in Africa south of the Sahara from 58.4 percent in 2000 to 40.4 percent in 2018 (World Bank 2021). Despite the persistence of high rates of poverty, the size of Africa's middle class increased by over half during the 2000s, accounting for 34.3 percent of the continent's population by 2011 (Ncube, Lufumpa, and Kayizzi-Mugerwa 2011).

Growing urbanization and rising incomes have led to marked changes in the composition of diets, with rising demand for purchased and processed foods and for higher-value foods such as animal products and fruits and vegetables. In urban areas, increased time pressures have raised demand for more convenient processed foods that can be prepared quickly (Hollinger and Staatz 2015). However, even in rural areas, rising incomes are associated with increased demand for processed and perishable foods (Tschirley et al. 2015a). Prospective analyses of food demand in eastern, southern, and western Africa suggest that these trends will persist into the future, with continued rapid growth in overall food demand and rising shares of processed food (Tschirley et al. 2015a; Zhou and Staatz 2016). The COVID-19 pandemic, which severely impacted Africa's economic growth in 2020 and is estimated to have pushed millions of Africans into poverty (Mahler et al. 2021), has had complex impacts on diets due to changes in incomes, food prices, and trade (Ulimwengu and Magne Domgho 2020; FAO 2021). The Russia-Ukraine conflict that began in early 2022 has also had severe impacts on food security through international trade shocks and high food price inflation (Badiane, Fofana, and Sall 2022). The impacts of recent crises and their likely duration are not yet clearly understood. However, as the continent's economic recovery continues, the role of the processing sector as an intermediary linking producers, especially those in rural areas, and consumers will likely continue to grow in importance.

Potential and Constraints of the Agrifood Processing Sector

Africa's agrifood processing sector is characterized by the presence of a small number of large firms and a proliferation of small and micro firms, with smaller firms showing lower labor productivity (Hollinger and Staatz 2015; Snyder et al. 2015; Soderbom 2011). Agrifood firms are affected by a number of constraints,

including lack of skills and human resources; limited access to land, finance, and capital; poor energy and transport infrastructure; high costs of operation; and lack of consistent and reliable access to raw materials. These barriers affect firms of all sizes, and often prevent small informal firms from expanding operations and employment and entering the formal sector (Hollinger and Staatz 2015).

Local processing firms' low capacity to upgrade product quality limits their ability to appeal to consumers and expand market shares. The preferences of relatively affluent urban consumers related to food quality, food safety, marketing, and packaging can be difficult for local producers and processing firms to meet. Focus groups of urban consumers in Lagos, Nigeria, and Accra, Ghana, found that consumers preferred products based on traditional staples, such as gari and yam products, but did not purchase them due to concerns about food safety and quality (Hollinger and Staatz 2015). Similarly, consumers in Senegal were found to purchase imported dairy products despite stated preferences for local dairy due to food safety concerns (Boimah and Weible 2021).

Outline of the Report

The three chapters that follow this introduction set the backdrop for the subsequent analysis by introducing many of the drivers of processing sector development, placing agrifood processing development into context as a key enabler of smallholder commercialization, and reviewing dynamics and trends in key agrifood processing sectors. First, in chapter 2, Badiane and colleagues argue that efforts to strengthen agrifood processing firms do not simply benefit the processing sector itself, but rather should be viewed as key elements of strategies to promote and incentivize smallholder commercialization. The authors review the drivers of food systems transformation in Africa, including urbanization and income growth, which have led to shifts in diets and the rise in importance of processed foods. Changing diets mean that the products demanded by consumers are very different from those available at the farmgate; thus, efforts to promote smallholder commercialization not only need to overcome the physical distance between smallholders and consumer markets, but also must bridge the difference in product sophistication. The processing sector is thus key to linking producers and consumers in the context of changing food systems. The authors review the examples of millet and other crops for which the development of a processing sector has been key to expanding consumption. They make recommendations for

policies and investments to promote the growth and development of the agrifood processing sector at different stages through provision of technical, institutional, and capacity strengthening support.

In chapter 3, Schreinemachers and co-authors review Africa's fruit and vegetable processing sectors through case studies of tomato processing in Ghana and Nigeria, fruit juices across the continent, pineapple processing in Benin, and traditional vegetable processing in Kenya and Tanzania. African countries tend to export unprocessed fruits and vegetables and import processed, higher value-added products; efforts to strengthen local processing sectors face significant challenges, including high production costs, difficulties in obtaining a reliable and consistent supply of raw materials, and the lack of cold chain infrastructure. Policies should focus on increasing the competitiveness of locally produced fruits and vegetables, including through the adoption of varieties more suited to processing, improvements in production processes to increase the stability of supplies, and institutional arrangements to organize smallholders into groups to facilitate coordination. Given the nutritional tradeoffs inherent in processing fresh fruits and vegetables, further research is needed to examine how to maximize nutrient retention during processing.

In chapter 4, Rich and co-authors examine evidence on Africa's rapidly transforming meat processing sectors by reviewing available data and presenting case studies from a number of countries. Traditionally, Africa's livestock exports have been primarily of live animals; efforts to add value and increase production and trade of meat products face numerous constraints. These include the use of low-yielding breeds, high prevalence of animal diseases, poor infrastructure, costly inputs, and limited domestic demand. In addition, improvements to the enabling policy environment are needed; for example, the development of grading systems would help to differentiate products and incentivize quality improvements. Case studies on meat production and processing in southern, western, and eastern Africa illustrate the complexity of meat value chains and underline the context-specificity of the challenges facing meat sectors across the continent. The authors note that, because of the close linkages between the live animal production sector and the meat sector, policies that promote the productivity, safety, and resilience of the live animal sector will also benefit the meat processing sector. In particular,

commercialization policies that increase small-scale producers' access to formal markets are needed.

The next set of chapters examine different aspects of agrifood processing sector development to draw lessons and recommendations to guide policies and investments. Chapter 5, by Ellis and co-authors, sets the stage by examining patterns in the sector's growth and highlighting challenges and opportunities for improving performance. A review of broad trends for countries with available data shows that the agrifood processing sector accounts for an important share of manufacturing employment and value added, and employment and labor productivity in the sector are growing. In-depth analysis for Tanzania and Ethiopia suggests that the processing sector is dominated by small and informal firms, which play important roles for livelihoods but often show relatively low labor productivity. Building on the growing role of processed food products in intra-African trade and redirecting demand for imported processed products to local products offer opportunities for growth of the sector. However, several challenges must be addressed, including increasing productivity in the agricultural production sector and in small processing firms.

In chapter 6, Tabiri and Sakyi examine the role of industrial clusters in transforming Africa's agrifood processing sector, suggesting that promoting clusters can be an important strategy to improve the sector's performance. Clusters, defined as spatial concentrations of related enterprises and institutions, provide a range of benefits to individual firms as well as for broader sectoral and economic growth; in the African agrifood processing sector, clustering can help small firms overcome some of the constraints to growth by facilitating access to markets, technology, inputs, and infrastructure. The authors discuss case studies of Uganda's fish processing cluster and South Africa's wine cluster, which demonstrate the importance of well-functioning institutions to provide marketing and technical support to promote firm growth and competitiveness. The authors provide recommendations for the roles of government and research and training institutions to capitalize on the potential of clusters to promote processing sector growth and development.

Firms' ability to innovate is an important factor in determining whether small enterprises can increase in size and profitability, generate employment, and contribute to economic transformation (Badiane and McMillan 2015;

Sonobe and Otsuka 2011). Chapter 7, by Tadesse and Gachango, focuses on factors that contribute to or inhibit innovation in firms in Africa's agrifood processing sector. Using enterprise survey data from selected countries, the authors find that the share of firms innovating—in terms of inventing or adopting products and processes—is relatively low and has declined over time. Governments can facilitate innovation by strengthening connections between firms and other innovation system actors through technology transfer agreements, contract farming, and the promotion of clustering. Expanding access to information and communication technologies (ICT) is critical to enable firms to interact with other actors, contribute to areas such as food safety, logistics, and traceability, and enable the development of new ICT-based products and services. To maximize effectiveness, programs to support innovation should target small enterprises and those with young or female managers, as they face especially steep barriers to investment and technology access.

Chapter 8, by Jenane and Ulimwengu, takes an in-depth look at the role of geographically targeted agricultural development initiatives, or agro-parks, in the development of Africa's agrifood processing sector as well as overall agricultural and economic transformation. The authors review current and past experiences with different types of agro-parks, including special economic zones, agro-industrial parks, and agri-clusters, and identify factors contributing to their success or failure. The chapter makes recommendations for the successful implementation of the African Union's Common African Agro-Parks (CAAPs) initiative, which seeks to increase the supply of locally produced and processed agricultural products. The chapter suggests that agro-parks can attract investment, create interlinkages among value chain actors, facilitate the provision of services for investors and firms, improve policy coherence, and ultimately contribute to agricultural sector transformation. However, the conditions for success are complex and require attention to the particular competitive factors of each proposed project. Essential success factors include effective design and management of infrastructure, provision of supportive services, strong private sector involvement at all stages, and consistent political support.

The report also includes two shorter boxes on featured issues and approaches in agrifood processing sector development. The first featured issue box, by Toshiaki Ono, discusses the challenges faced by agrifood processing

firms—particularly small and informal firms—in obtaining external finance. Barriers to obtaining financing are particularly significant for small and informal firms. Some new developments, such as the rise of digital financial services, offer important potential to bridge financing gaps and help financial institutions and firms overcome constraints to broadening access to financial services. The second featured issue box, by Oliver Kirui, discusses required policies and investments to promote the development of technical, management, and leadership skills for agrifood processing enterprises. The author identifies several important practices to pursue, including building partnerships between private sector companies and public training and education providers to ensure that training matches labor market needs, and focusing attention on developing skills required for entrepreneurship.

In addition to assembling evidence on key development issues, the ATOR serves as the official monitoring and evaluation report of the Comprehensive Africa Agriculture Development Programme (CAADP). Chapter 9, by Collins and co-authors, reviews progress in CAADP implementation as well as the status of countries, regions, and the continent as a whole with respect to the indicators of the CAADP Results Framework. Progress on many of the Results Framework indicators, as well as toward the goals and targets of the CAADP-Malabo Biennial Review, was significantly delayed by the COVID-19 pandemic beginning in 2020 and is likely to be further affected by the Russia-Ukraine conflict of 2022 and associated trade disruptions. However, progress on several fronts, including in maintaining strong economic growth and reducing poverty and hunger, had already slowed before the pandemic. The authors note several challenges affecting the implementation of national agriculture investment plans in Africa and the need for concerted efforts to enhance implementation.

Taken together, the chapters of the 2022 ATOR provide a multifaceted view of the evolution and performance of Africa's agrifood processing sector, the challenges it faces, and the potential it offers to contribute to food systems transformation and sustainable development. The report is intended to guide policymakers and partners in designing policies and investments to strengthen the sector and increase its ability to provide healthy diets for all.