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DISCUSSION PAPER No. 283

**Rice trade and value chain development
in West Africa:**
AN APPROACH FOR MORE COHERENT POLICIES

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October 2020

The development of the rice sector in West Africa represents a significant policy challenge. Following the 2008 food price crisis, West African countries succeeded in boosting rice production. Yet, with little improvement in the competitiveness of the sector, they continued to import increasing amounts of rice, exposing them to international market volatility.

Trade policies have contributed to this outcome. Low import protection, compared to Asian producers, has been a major factor, as smuggling activities between countries with different tariff levels show. Tax exemptions often arbitrarily granted to rice importers have undermined the stability of domestic markets. Weak enforcement of quality and food safety norms have allowed for the importation of substandard rice, unfairly competing with West African farmers.

Besides official policies, complex and interlocking interests among private and public actors drive rice trading activities. The importation and distribution of rice, which generates sizable rents, is supported by powerful economic and political actors.

Nonetheless, recent developments suggest that progress in the regulation of rice markets and the development of competitive and inclusive value chains is achievable. It requires an alignment of interests, the promotion of coherent policies linking a stricter regulation of imports to the structuring of domestic markets, and incentives for private investment.

Building on existing dynamics in cross-border regions, trade facilitation could further contribute to the emergence of modern value chains and food security. Scaling up promising experiments in market and trade regulation, while developing the rice sector as part of more sustainable agri-food systems, also depends on the interests of different states in better coordinating national rice policies and implementing regional trade agreements.

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Acknowledgements

The authors express their gratitude to all the persons who contributed, directly or indirectly, to this study. This paper benefited from the written contributions of several of their colleagues at the European Centre for Development Policy Management (ECDPM) and the *Initiative prospective agricole et rurale* (IPAR). Seydina Sene at IPAR conducted the fieldwork in Nigeria and provided valuable support and insights for the analysis of rice sector dynamics in the eastern trade basin. Nouhoum Bocoum provided assistance for the fieldwork in Mali. Alix Afouda, at the *Laboratoire d'analyse régionale et d'expertise sociale* (LARES), conducted the fieldwork in Benin, visiting two sites near the border with Nigeria where rice is transhiped between the two countries. The authors benefited from his advanced knowledge of economic relations between Benin and Nigeria. Elhadji Diagne and Thierno Niang, statisticians at IPAR, assisted the authors with the compilation of data on rice consumption, production and trade. The contribution of Hanne Knaepen, at ECDPM, to the review of the past effects of and the future risks posed by climate change for the rice sector in West Africa and other rice producing regions, is gratefully acknowledged. The authors would also like to thank Bruce Byiers and Poorva Karkare for the insightful discussions related to this work and their constructive comments, as well as Carmen Torres and Francesco Rampa for sharing useful information based on prior work on the rice sector in West Africa. Alexandra Beijers provided efficient editorial and logistical support to this paper.

The authors are particularly grateful to Brahima Cissé, at the the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), who gave access to the cross-border trade data, and to Laouali Ibrahim, at the Famine Early Warning Systems Network (FEWS NET), who shared rice price data. They also would like to sincerely thank Njack Kane, at Intervalle, who provided valuable information and feedback throughout this project, and Paul Kiepe, at AfricaRice, who hosted the technical workshop organised in Abidjan in October 2019.

The authors wish to express their thanks for the support and valuable suggestions on previous drafts of this paper and various aspects of this study provided by Johanes Agbahey, Advisor at the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), which supported the study on behalf of the German government. The authors would also like to thank Andrea Wilhelmi-Some for her help in liaising with members of the Rice Working Group supported by the GIZ.

The authors sincerely acknowledge all the participants to the Abidjan workshop, including Gaoussou Touré, *Ministre de la Promotion de la riziculture* of Côte d'Ivoire, and also importantly all the persons interviewed in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Nigeria, who generously took time to share information without which this study would not have been possible.

Fabien Tondel and Cecilia D'Alessandro are at ECDPM. Ibrahima Hathie is at IPAR. Clarisse Blancher, formerly at ECDPM, is at the Directorate-General for European Civil Protection and Humanitarian Aid Operations of the European Commission.

The views and opinions expressed in this paper are those of the authors and do not necessarily state or reflect the opinions of ECDPM, IPAR or any other organisations mentioned. The views expressed in this publication do not necessarily reflect the views of the German government and the GIZ.

Acronyms

ABSSA	Agence Béninoise de la Sécurité Sanitaire des Aliments
AfCFTA	African Continental Free Trade Area
AGRA	Alliance for a Green Revolution in Africa
ANACORD-B	Association Nationale des Commerçants de Riz du Burkina Faso
APIEx	Agence de Promotion des Investissements et des Exportations du Benin
APP	Agriculture Promotion Policy
ATA	Agricultural Transformation Agenda
AWD	Alternate Drying and Wetting
BFU	Bordereau de Frais Unique
BIVAC	Bureau Inspection Valuation Assessment Control
BMGF	Bill and Melinda Gates Foundation
BNDE	Banque Nationale pour le Développement Économique
CAADP	Comprehensive Africa Agriculture Development Programme
CAD	Commissionnaire Agréé en Douanes
CAP	Common Agricultural Policy of the European Union
CARD	Coalition for African Rice Development
CBN	Central Bank of Nigeria
CCTC	Continental Commodity Trading Company
CET	Common External Tariff
CFA	Communauté Financière d'Afrique
CGIAR	Consultative Group for International Agricultural Research
CGP	Caisse Générale de Péréquation
CI	Côte d'Ivoire
CIC	Compagnie d'Investissements Céréalières
CIF	Cost, Insurance, and Freight
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CIR-B	Comité Interprofessionnel du Riz du Burkina
CIRIZ	Comité interprofessionnel du Riz du Sénégal
CNCAS	Caisse Nationale de Crédit Agricole du Sénégal
COMTRADE	United Nations International Trade Statistics Database
CPS/SDR	Cellule de Planification et Statistiques du Secteur Développement rurale du Mali
CRS	Catholic Relief Services
CSA	Commissariat à la Sécurité Alimentaire du Mali
DNCC	Direction Nationale du Commerce et de la Concurrence du Mali
DPI	Déclaration Préalable d'Importation
ECDPM	European Centre for Development Policy Management
ECOWAP	ECOWAS Regional Agricultural Policy
ECOWAS	Economic Community of West African States
ESOP	Entreprises de Services et Organisations des Producteurs du Benin
ETG	Export Trading Group
ETLS	ECOWAS Trade Liberalisation Scheme
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FDA	Food and Drugs Authority of Ghana

FEWS NET	Famine Early Warning Systems Network
FIRS	Federal Inland Revenue Service of Nigeria
GDCM	Grand Distributeur Céréaliier au Mali
GIEWS	FAO Global Information and Early Warning System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit / German Corporation for International Cooperation
GM	Genetically Modified
GSA	Ghana Standards Authority
GUFE	Guichet Unique de Formalisation des Entreprises
ICRC	International Committee of the Red Cross
IFAD	International Fund for Agricultural Development
INSAE	National Institute of Statistics of Benin
INSTAT	Institut National de la Statistique du Mali
IPAR	Initiative Prospective Agricole et Rurale
ITC	International Trade Centre
LARES	Laboratoire d'Analyse Régionale et d'Expertise Sociale
MAEP	Ministère de l'Agriculture de l'Élevage et de la Pêche du Benin
MINUSMA	United Nations Multidimensional Integrated Stabilization Mission in Mali
NAFCO	National Food Buffer Stock Company
NCS	Nigeria Customs Service
NGO	Non-Governmental Organisation
OFNACER	Office national des céréales
ONASA	Office National d'Appui à la Sécurité Alimentaire
OPAM	Office Des Produits Agricoles du Mali
PAU	Politique Agricole Commune de l'UEMOA
PNAR	Programme National d'Autosuffisance en Riz
PNPR	Plateforme Nationale des Producteurs de Riz du Mali
PPRSD	Plant Protection and Regulatory Services Directorate of Ghana
PRACAS	Programme d'Accélération de la Cadence de l'Agriculture Sénégalaise
PSRSA	Plan Stratégique de Relance du Secteur Agricole
RIDAN	Rice Importers and Distributors Association of Nigeria
ROPPIA	Réseau des organisations paysannes et de producteurs de l'Afrique de l'Ouest
RPCA	Réseau de Prévention des Crises Alimentaires
SAP	Structural Adjustment Programme
SCPZ	Staple Crops Processing Zones
SDTM-CI	Société de Distribution de Toutes Marchandises en Côte d'Ivoire
SIM	System d'Information sur les Marches
SMEs	Small and medium-sized enterprises
SNDR	Stratégie Nationale pour le Développement de la Riziculture
SONACOR	Société nationale de décortilage et de commercialisation du riz
SONAGESS	Société nationale de gestion des stocks de sécurité
SONAPRA	Société nationale pour la promotion agricole
SOPROFA	Société pour la promotion des filières agricoles
SPS	Sanitary and Phytosanitary Measures
TCI	Taxe conjoncturelle à l'importation
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations Children's Fund

UNPRB	Union Nationale des Producteurs de Riz du Burkina Faso
UNSD	UN Statistics Division
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VAT	Value Added Tax
WAEMU	West African Economic and Monetary Union
WATIP	Promoting West Africa Trade Integration
WFP	United Nations World Food Programme
WTO	World Trade Organisation

1. Introduction

1.1. Rice, a major sector of the West African agri-food system

Rice has become an increasingly important staple food in the diet of households in West African countries, representing 37% of cereal food consumption.¹ **Rice production steadily increased in these countries in the past decades, with this crop becoming an important source of food and revenue for farm households in the main producing areas. However, as consumption needs rose faster, West African countries became heavily reliant on overseas rice imports.** The spike in international rice prices and disruptions in rice trading in different parts of the world were significant events of the 2008 food price crisis. These events particularly affected West African countries, especially vulnerable households in urban centres (Mendez del Villar *et al.*, 2011).

In the aftermath of that crisis, West African governments ambitiously boosted public support for the rice sector. Regional organisations launched initiatives to back the efforts of member states, notably the Regional Offensive for the Sustainable Revival of Rice Production in West Africa led by the Commission of the Economic Community of West African States (ECOWAS). The measures governments took mostly aimed at rapidly increasing farm production by distributing improved seeds, providing fertiliser subsidies, investing in large-scale irrigation projects, and in some cases supporting farm prices. They usually had the stated objective of attaining national self-sufficiency in rice.²

Primary production figures increased considerably in the period after the 2008 food price crisis. However, in general, most of the growth in rice output has come from an expansion in the cultivated area. **Except for a few cases,³ those policies have not resulted in large and durable productivity gains nor in the emergence of modernised, more coordinated (based on contract farming) or integrated value chains** (Mendez del Villar *et al.*, 2011, Mees, 2016, and Soullier *et al.*, 2020). Rice marketing is still dominated by traditional, small- and medium-scale millers and traders (Soullier *et al.*, 2020). In most countries, policies have inadequately addressed various “bottlenecks” in the value chain, particularly weak linkages between smallholder rice farmers, industrial processors and distributors. Rice quality management in local supply chains, already deficient before 2008 (USAID, 2009), has generally remained inadequate and has continued to affect the efficiency of the marketing of locally produced rice. At the same time, national policies neglected the role played by cross-border trade.

On the other hand, imported rice, abundantly available, affordable—especially as international prices receded after 2012—and appealing to urban consumers, has continued to be in high demand, with population growth and changes in diets also contributing to this trend. **West African countries have remained highly dependent on rice imports from overseas.** Rice imports cover 40% of consumption needs in West Africa, according to Grow Africa and AGRA (2018). Data from the Food and Agriculture Organization (FAO) indicate that imported rice represents 34% of the domestic supply of rice in West Africa.⁴ Official data might even underestimate actual imports, as the analysis in this

¹ Authors’ calculation based on FAOSTAT new food balances for the Western Africa region (including the Economic Community of West African States and Mauritania), including rice, maize, millet, sorghum and wheat, for the years 2015, 2016 and 2017.

² In September 2018, ministers of agriculture from West Africa and other regions of Africa recommitted to supporting the development of the rice sector, including through a continental investment plan for the rice sector that aims to mobilise public and private financing for investment in rice value chains.

³ Senegal has had the strongest rice productivity growth rate among West African countries in recent years (Mees, 2016). In this country, the development of the rice value chain, largely led by the private sector, has made significant progress since the 2008 food price crisis, with a more pronounced emergence of modern mills. Progress in the rice sector has been made in Nigeria too, albeit to a lower extent.

⁴ For the area comprising ECOWAS and Mauritania, over the period 2015 – 2017.

paper suggests. West Africa as a whole has become a large importer of rice in the world, accounting for about 18% of global imports.⁵ In 2014, the rice import bill of ECOWAS countries amounted to €4 bn, which was a serious drain on their foreign exchange reserves (Grow Africa and AGRA, 2018). **This situation has made West African countries exposed to the volatility of international rice markets. The spike in international rice prices in the first half of 2020, due to export restrictions on the back of fears of supply shortfalls in Asian exporting countries brought about by the Covid-19 pandemic, is an illustration of the international market risk to which West African countries remain exposed** (see Kathiresan, Nagai and Haneishi, 2020). In addition, following the market upheavals of 2008, there have been concerns about the lack of transparency of overseas rice imports, the importation of substandard rice, and illegal transshipping between West African countries.

Recent information and analyses on the drivers and the effects of rice trade in West African countries are scant. Recent studies have examined the cases of Mali and Senegal (Diakit  and Bagayoko, 2014; and Hathie and Ndiaye, 2015). These studies assessed the interactions between rice importation and the marketing of locally produced rice and the drivers of competitiveness in the domestic rice sector. For example, in Senegal especially, variations in international prices strongly influence the prices of locally produced rice. That makes the domestic rice sector very exposed to the volatility of international markets. Markets for imported rice and locally produced rice interact in multiple ways, which rice sector development strategies should take into account. Analyses were conducted in other West African countries too, including Ghana and Nigeria. Yet, most of those studies have not considered rice import dynamics from a regional perspective, differences or commonalities across countries in how international markets interact with domestic markets, or interlinkages between national rice sectors. Those may also have implications for rice policies. Furthermore, there has been little stakeholder dialogue about the regulation of rice trade as an element of the enabling environment for the development of rice value chains in West Africa.

1.2. A study to shed light on policy challenges surrounding rice trade

In this context, the European Centre for Development Policy Management (ECDPM) and the Initiative Prospective Agricole et Rural (IPAR) undertook **a project to provide an updated and in-depth understanding of rice trade dynamics in West African countries and analyse interlinkages between rice trading systems and the development of local and regional rice value chains**. Key research questions are whether and how trade-related policies and regulations contribute to strategies for the development of competitive and resilient rice value chains. This paper presents an analysis of rice trade and, based on this diagnosis, outlines a set of trade- and market-related measures that could promote a more enabling environment for the development of the rice sector in West Africa. In doing so, we take into consideration various factors that determine national rice policies and regional cooperation.

The project ultimately aims at supporting rice sector stakeholders and networks in coming to a shared understanding of the role of rice trade and in building a consensus on feasible measures, in favour of rice value chain development in West Africa, and that provide remunerative opportunities for smallholder farmers and non-farm workers. Achieving that will require a deeper policy dialogue at the nexus of different policy areas, including agriculture, trade and industry.

⁵ Same as footnote 4.

1.3. Methodological approach

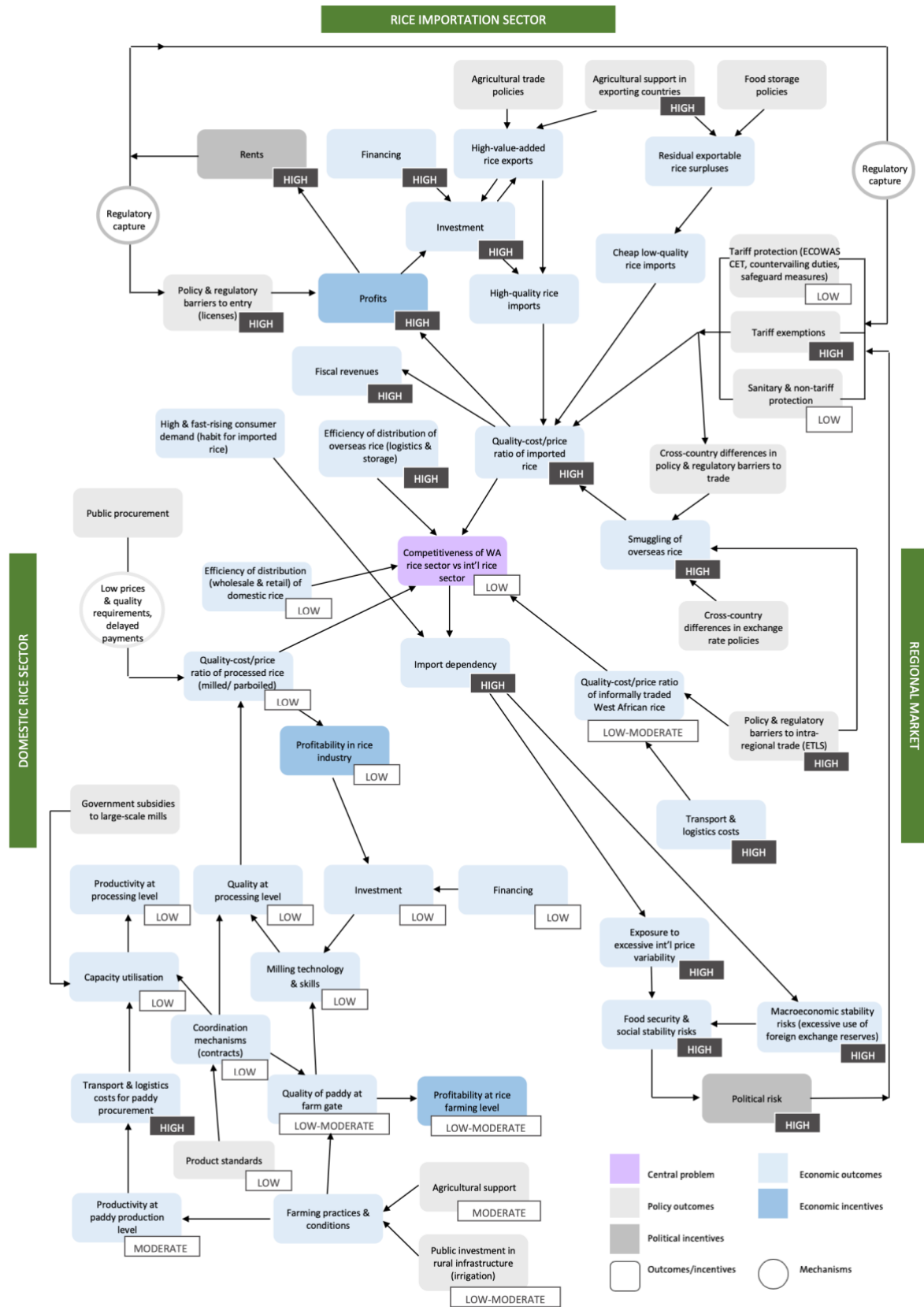
To analyse rice trading and marketing systems in selected West African countries, we begin by describing aggregate trends in rice trade, and then examine in greater detail the structure and dynamics of rice trade flows, markets and supply chains. We consider both trade in rice originating from overseas and trade in rice produced in West African countries, and as possible we quantify those trade flows. **The study focuses on Burkina Faso, Ghana, Mali, Benin and Nigeria.** However, where relevant, the analysis also covers Côte d'Ivoire, Niger, Togo and Senegal. We also document policies, regulations and procedures that concern rice trade, at the national and regional levels.⁶

In combination with the analysis of rice trade flows and markets, we use information on policy and regulatory events to assess the effects of trade policy on the domestic sector. We also assess the interactions between imports of overseas rice and intra-regional trade in locally produced rice.

Our analytical framework can be represented as the “problem tree” in Figure 1, which graphically depicts the drivers and effects of rice trade, distinguishing trade in overseas rice, intra-regional trade in locally produced rice, and their linkages with domestic production and marketing.

⁶ Policies and regulations will include the Common External Tariff (CET), enacted in 2015, and other trade measures, such as the *taxe conjoncturelle à l'importation* (TCI) or episodic exemptions, their implementation as regards rice trade, as well as informal levies and administrative procedures (including sanitary and phytosanitary (SPS) regulations) applied to rice. They will also include the ECOWAS trade liberalisation scheme (ETLS), its implementation at borders as regards rice trade, as well as formal and informal levies, administrative procedures (including SPS regulations) and other non-tariff barriers that are applied to rice.

Figure 1. Illustrative problem tree for the rice trading systems in West African countries



The three main causal chains in the problem tree—that are (i) the domestic marketing channel, (ii) the extra-regional trading system and (iii) the intra-regional trade channel—determine the competitiveness and the trade balance of the rice sector in West African countries. Figure 1 also gives a preview of the analysis of trading systems by indicating the relative level (high or low) of different factors in the causal chains, representing interlinkages between the three major causal chains, and showing key policies that drive trading and marketing systems. In this framework, rice consumption is a crucial factor determining the trade balance of the rice sector. However, it is not the focus of the study, which mainly analyses the supply side.

We collected information on rice trade, markets and policies from multiple sources. We used several databases on trade, production and consumption, which will be described in the following sections. The period of analysis depends on the availability of data, covering mainly the years after the 2008 food price crisis and, as relevant, also considering market and policy developments since the early 1990s. We reviewed previous studies and reports. We conducted in-country interviews in the five countries of focus with selected key informants, including public administration officers, farm producers' organisations, processors, importers and distributors of rice, experts and value chain development practitioners. In southeastern Benin, a research partner visited two places near the border with Nigeria to observe rice trading activities and interview local actors. **In October 2019, the project team organised a workshop with the objectives to share their preliminary analysis of rice trading systems, and to allow for an exchange of experiences between experts, practitioners, private sector actors and public administration officers.** The workshop was held at AfricaRice headquarters in Abidjan on 1 – 2 October. This report incorporates the outcomes of the workshop, including the policy propositions that emerged from the discussions.

To conduct a fine-grained analysis of rice trade and support context-specific policy dialogue and formulation, the study focuses on transnational market catchments. We analyse interactions between rice trade and the domestic sector and cross-border supply chain dynamics in two sub-regional areas. We first consider the sub-region including Mali, Burkina Faso and Ghana, in the central trade basin (which also includes Côte d'Ivoire and Togo). We then look at rice trade in Benin and Nigeria, in the eastern trade basin.

The central trade basin comprises countries with different patterns of consumption and production potential, and different levels of coverage of consumption needs by domestic production. It straddles two river basins, the Niger and the Volta, with major rice-producing areas. These countries are linked by strong cross-border agricultural trade flows due to production complementarities, with possible interactions between domestic rice markets. **In contrast, Benin and Nigeria present a case involving two countries with similar rice production conditions, and also large rice deficits—**Nigeria is a major producer but an even bigger consumer of rice. Trade in different types of goods, notably imported products, runs high between these two countries, due to different economic and trade policies.

1.4. Structure of the report

In what follows, we provide an overview of market and trade trends for the West African countries and sub-regions covered by the study (Section 2). Then, in Section 3, we examine in detail the structures and functioning of overseas rice supply chains and cross-border trade in locally produced rice. In Section 4, we review key national and regional policies and regulations that have influenced rice marketing and trade in the countries of focus and analyse their trajectories, market effects, and interactions amongst countries. Section 5 summarises the country and sub-regional analyses by highlighting common factors in the development of the rice sector and critical differences in rice trading dynamics between countries. This diagnosis then leads us to outline a possible approach to addressing challenges and opportunities linked to rice trade (Section 6). In the final section (Section 7), we provide concluding remarks and indicate outstanding questions for next steps in rice policy processes in West Africa.

2. Aggregate rice market and trade trends

This section provides an updated account of trends in rice consumption, production and trade in West African countries of focus, Burkina Faso, Ghana, Mali, Benin and Nigeria, while also considering neighbouring countries (Côte d'Ivoire, Togo and Niger). It also considers major factors driving these trends.

2.1. Consumption, production and trade data

Our primary data source is the database of the FAO, FAOSTAT. From the Food Balance Sheet database, we extracted data on rice production, consumption,⁷ exports, imports, seed utilisation and food aid. For production, we used FAOSTAT data up to 2012. For the following years (for the period 2013 – 2018) we used production data from the United States Department of Agriculture (USDA).⁸ We also used the trade matrix database of FAOSTAT to obtain bilateral trade volumes.⁹

We compared annual bilateral trade data from FAOSTAT with the data from the International Trade Centre (ITC) database for selected countries (Benin and Mali) and found very few differences, probably resulting from different data processing methods. However, the ITC bilateral trade data series for West African countries displayed fewer missing values than FAOSTAT, especially in recent years. We exploited the data from ITC for different types of rice (whereas FAO does not provide such disaggregated data) and for monthly bilateral trade flows (although for the latter, the data are scant). In addition, we double-checked ITC bilateral trade data by comparing volumes published by the Thai Rice Exporters Association and ITC exports volumes from Thailand to West African countries. The values were similar with few discrepancies. **Concerning Nigeria, it should be noted that there is substantial uncertainty about the actual volume of rice imports in recent years, with large discrepancies between different data sources.** For instance, trade data from FAOSTAT and USDA diverge significantly starting in 2005, even though they maintain an overall consistent trend (Gyimah-Brempong, Johnson and Takeshima, 2016; Ojewale, 2019).¹⁰ **We relied on FAOSTAT data, for consistency, but we also exploited USDA data when relevant.**

We also intended to acquire official volumes directly from Ministries of Trade or national statistical offices of the countries reviewed. Unfortunately, either the procedures to obtain this kind of data were too time-consuming or our requests were unsuccessful. In principle, the values available on FAOSTAT are based on data compiled and disclosed by these national actors. However, discrepancies between FAOSTAT and official national data are possible as FAO has its own method to reconcile data on different but related indicators. Indeed, rice exports and imports

⁷ The FAOSTAT Food Balance Sheet data measures food availability instead of actual food consumption. The food supply for domestic utilisation (that is, food availability) is the sum of domestic production and imports, less exports and the change in stocks from the previous year. For each food product, the per capita supply for human consumption is obtained by dividing the total availability by the population. Using food product-specific conversion rates, per capita supply can be expressed in calories, proteins and fats.

⁸ Production data until 2018 are also available in FAOSTAT. However, since 2013, FAO started using a different data processing methodology, which creates inconsistencies between paddy and milled-equivalent rice production values. This is why we consider USDA data from 2013 onwards.

⁹ The FAOSTAT data on import/export quantity for rice, like other agricultural products, are obtained from the global trade data repository of the UN Statistics Division (UNSD), COMTRADE, which collects trade data from National Customs Offices and National Statistics Offices. These data undergo FAO data processing and validation before dissemination, incorporating various data quality checks to identify data inconsistencies in the trade unit value outliers, discrepancies between the reporter data and the trading partner declarations, and the global trade imbalance by item or group of items.

¹⁰ In 2019, USDA announced it had adjusted its data on Nigeria's rice imports due to flaws and inconsistencies in the national data.

volumes provided by the Ghanaian Ministry of Trade (from their electronic customs system) matched FAO data for 2013, 2017 and 2018, but were significantly different from those available on FAOSTAT and ITC from 2014 to 2016, even though they showed a similar trend. For consistency, we thus relied on FAOSTAT data.

2.2. Consumption trends

Rice has become a major staple food in West Africa, although rice consumption has evolved differently across countries in the region. Urbanisation, household income growth, changing lifestyles¹¹ and dietary preferences have favoured a shift towards rice and away from traditional cereals. The evolution of food consumption has been an important driver of rice trade.

Nigeria is by far the biggest consumer of rice in the region, largely due to its population size. Côte d'Ivoire is the second biggest consumer in the region. Then, amongst the countries considered, come Mali and Ghana. Burkina Faso and Niger are much smaller rice consumers (see Figure 2).

Since the 1980s, aggregate rice consumption has grown rapidly in most West African countries. Aggregate consumption growth was particularly high in the 1980s, and then in the 2000s.

To better understand these aggregate trends, we distinguish different periods:

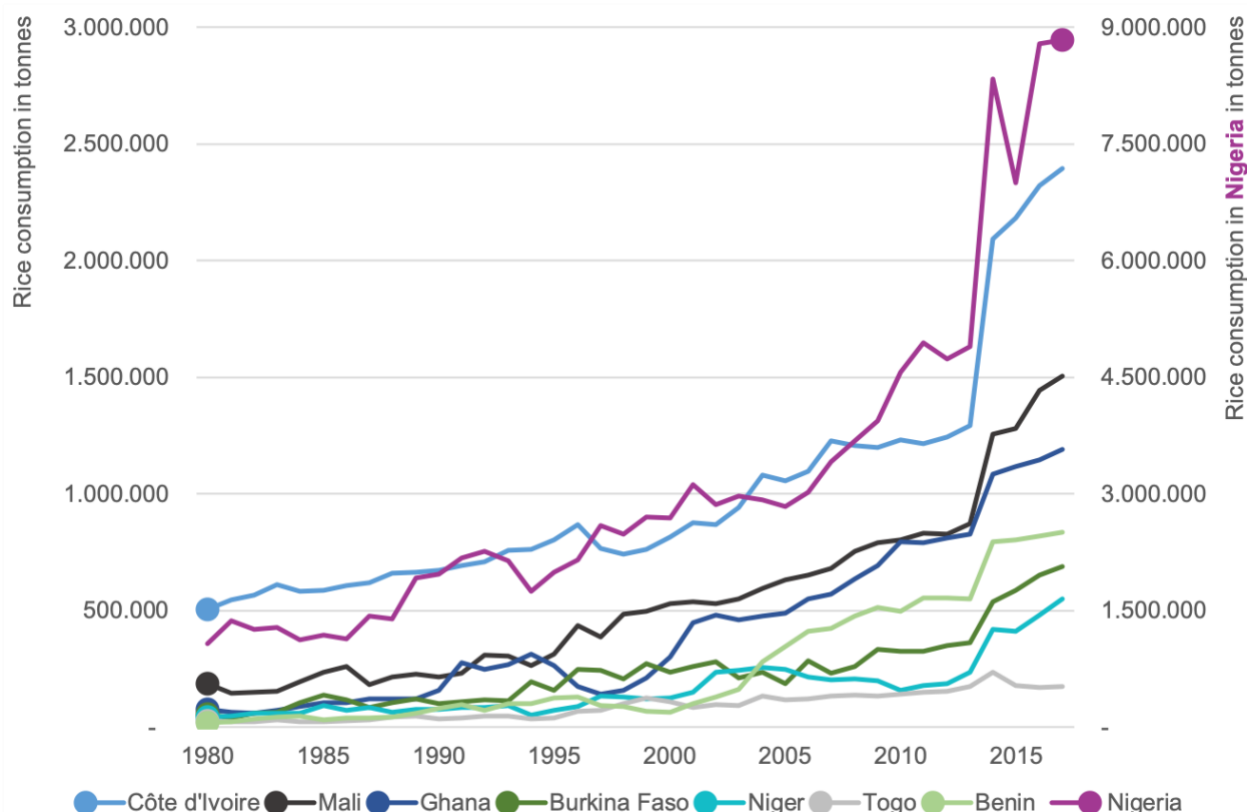
- 1980 – 1993: a period of economic crisis, particularly in coastal countries (Côte d'Ivoire, Ghana) due to the slump in agricultural export commodity prices (cacao, coffee), which led to deep economic reforms through the structural adjustment programmes¹² (SAPs) associated with macroeconomic stabilisation measures promoted by the International Monetary Fund and the World Bank; the aftermath of several droughts in Sahelian countries in the 1970s and 1980s;
- 1994 – 2000: the post-SAP period, following the devaluation of the Western African CFA franc in early 1994;¹³ period of significant economic restructuring;
- 2001 – 2007: a high-growth period (rising commodity prices);
- 2008 – present: the aftermath of the global economic and financial crisis and the food price crisis; agricultural production and trade growth in (West) Africa; but declining commodity prices and slower economic growth.

¹¹ The ease of storage and preparation of rice, compared to other staples, have favoured the consumption of the former especially among urban households (Africa Rice Centre, 2011; Calpe, 2006; USAID, 2009, in Naseem, Mhlanga, and Diagne, 2013).

¹² In summary, the SAPs involved exchange rate policy reforms so as to 'realign' exchange rates; the deregulation of domestic markets with a withdrawal of the state (including the phasing out of state marketing boards); and trade liberalisation. These programmes led to a decrease in public agricultural expenditures, negatively affecting the productivity of the agricultural sector (in particular through the reduction in fertiliser subsidies). This caused a decrease in the competitiveness of West African agri-food sectors, including rice.

¹³ The devaluation of the CFA franc took place in January 1994. This exchange rate policy reform is considered as the completion of the SAPs for the countries of the CFA zone. Other West African countries also implemented devaluations around that time.

Figure 2. Rice consumption in West African countries, 1980 – 2017



Source: FAOSTAT (2020).

Following the SAPs, and despite the devaluation of the CFA franc (1994), rice consumption grew rapidly in several countries: Burkina Faso, Mali, Togo and Niger (see Table 1). Rice consumption grew at a rate of 11% in Sahelian countries between 1994 and 2000, compared to just 5% in coastal countries. Between 2001 – 2007, a period of relatively fast economic growth in West Africa, rice annual consumption growth accelerated by one percentage point. Rice consumption grew especially rapidly in Benin and Ghana. In the period, 2008 – 2012, rice consumption growth slowed down slightly, to 5%. Higher prices for imported rice in the aftermath of the food price crisis did not seem to have greatly reduced demand. Afterwards, in the most recent period, 2013 – 2017, consumption grew rapidly, at a rate of 15% in coastal countries and 16% in Sahelian ones.

Table 1. Rice consumption growth in West African countries (average annual growth rates, country weighted averages by period)

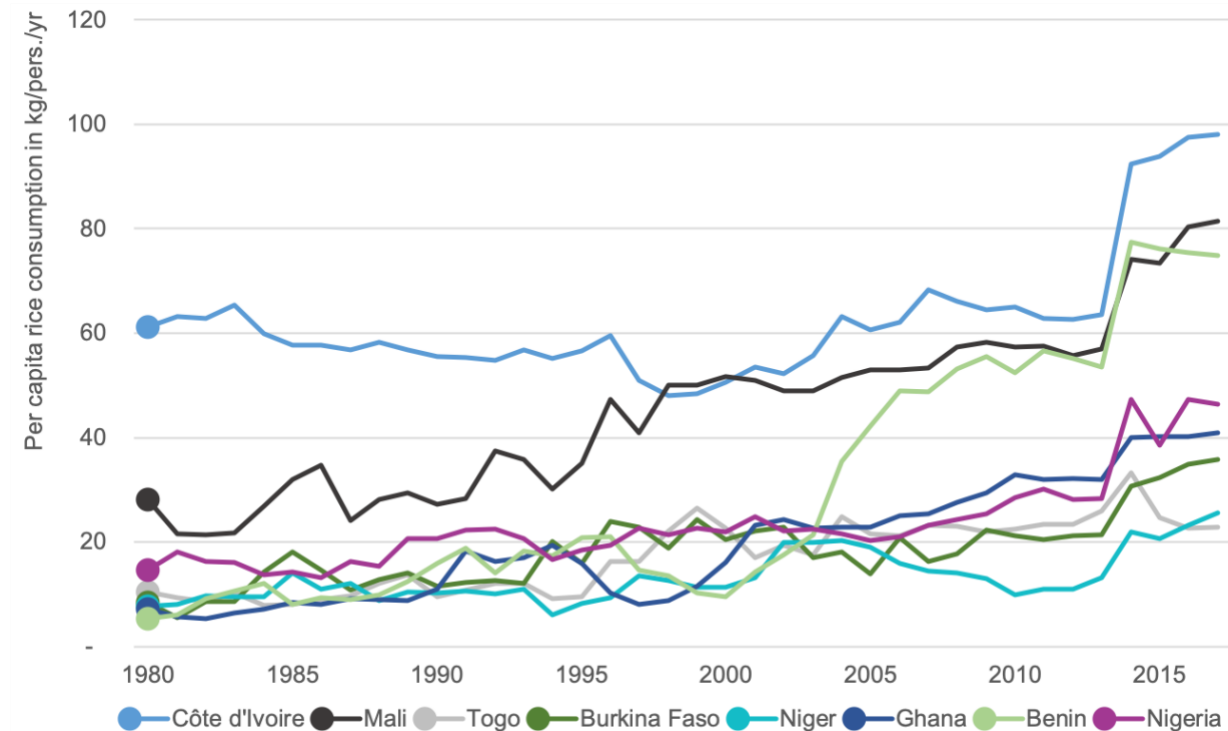
	Benin	Burkina Faso	Côte d'Ivoire	Ghana	Mali	Niger	Nigeria	Togo	All	Coastal	Sahelian
1980-1993	16%	9%	3%	12%	5%	7%	6%	6%	6%	6%	7%
1994-2000	-5%	16%	1%	5%	10%	9%	4%	16%	5%	5%	11%
2001-2007	32%	2%	6%	11%	4%	9%	4%	5%	6%	6%	4%
2008-2012	6%	9%	0%	7%	4%	-1%	7%	3%	5%	5%	5%
2013-2017	10%	16%	16%	8%	14%	27%	17%	4%	15%	15%	16%

Source: FAOSTAT (2020).

Notes: values in blue are at least five percentage points above the period average for all countries. Values in grey are at least five percentage points below. These thresholds were chosen to point the attention of the reader to extreme values.

Per capita consumption figures show that Ivorian and Malian households are the biggest rice consumers among the eight countries considered (see Figure 3). Beninese have become similarly big consumers of rice—even though consumption is likely overestimated due to significant cross-border trade between Benin, Niger and Nigeria (see section 3.2.3). Ghanaians, Nigerians, Togolese and Burkinabe are intermediate consumers. Nigeriens consume the least rice among the eight countries. Throughout the region, households have consumed more and more rice over time. The increase in consumption per person in Benin, Ghana and Mali is particularly notable.

Figure 3. Per capita rice consumption in West African countries, 1980 – 2017



Source: FAOSTAT (2020).

Note: per capita rice consumption is obtained by dividing rice availability by population.

On average, households in coastal countries and the central part of West Africa consume more rice than those in Sahelian countries and the eastern part of the region, respectively. Per capita consumption almost doubled between the 1980s and the 2010s.¹⁴ It seems to have increased most rapidly in the eastern part of the region, especially after 2000 (see Table 2).

¹⁴ Although this study does not examine pre-1980 dynamics, it is worth noting that per capita rice consumption growth was already strong between 1960 and 1980 (Delgado, 1989).

Table 2. Per capita rice consumption in West African subregions (kg/pers./yr, country weighted averages by period)

	All	Coastal	Sahelian	Central	Eastern
1980-1993	19,73	21,52	16,74	23,77	12,99
1994-2000	24,20	23,75	24,95	29,51	15,35
2001-2007	30,79	31,74	29,19	34,79	24,11
2008-2012	36,16	39,95	29,86	39,13	31,21
2013-2017	48,98	53,32	41,74	51,59	44,62

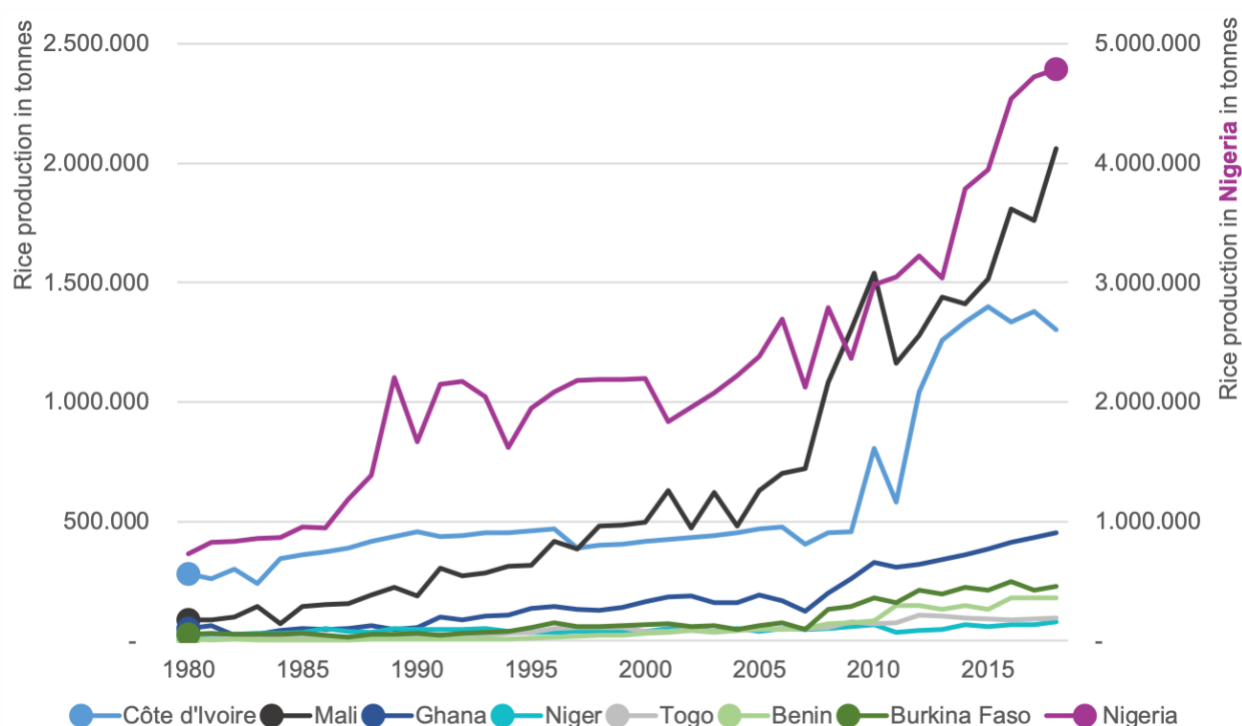
Source: FAOSTAT (2020).

Note: values in blue are above the period average.

2.3. Production trends

Over the past decades, rice has become a major part of cereal production in most West African countries (see Figure 4).

Figure 4. Rice production in West African countries, 1980 – 2018



Sources: FAOSTAT (2020) from 1980 to 2012, USDA (2020) from 2013 to 2018, except for Niger (USDA from 2008).

Note: Production data until 2018 are also available in FAOSTAT. However, since 2013 FAO started using a different data processing methodology, which creates inconsistencies between paddy and milled-equivalent rice production values. This is why we use USDA data from 2013 onwards.

As for consumption, **Nigeria is by far the biggest producer of rice in West Africa**. Mali is currently the second rice producer amongst the eight countries considered here. Côte d'Ivoire closely follows it. The other countries are much smaller producers: Ghana, Burkina Faso and Benin; and further behind Togo and Niger.

Between the 1980s and the early 1990s, in the eight countries considered, rice output grew at a relatively high pace (9% annually on average; see Table 3). Output growth was notably high in Mali and Ghana, and also in Togo and Nigeria. Following the SAPs, rice output growth almost came to a halt in many of these countries (3% annually on average), particularly in Côte d'Ivoire and Nigeria. Mali was an exception amongst large producers as annual output growth remained close to 10% (Barry, Salinger and Pandolfi, 2000).

In the early 2000s, rice output growth continued to slow down (3% annually on average). Nonetheless, Malian rice production continued to grow at 8% annually between 2001 and 2007.

Following the 2008 food price crisis, and a boost in public support to the rice sector, output grew at a fast clip in all eight countries. However, production data show questionable movements in output. For example, the jump in output in Nigeria in 2016 sharply deviates from the historical trend in production. This large increase could be due to mismeasurement or misreporting.

Table 3. Rice production growth in West African countries (average annual growth rates, country weighted averages by period)

	Benin	Burkina Faso	Côte d'Ivoire	Ghana	Mali	Niger	Nigeria	Togo	All	Coastal	Sahelian
1980-1993	2%	6%	5%	12%	15%	9%	10%	11%	9%	9%	13%
1994-2000	27%	11%	-1%	7%	9%	-3%	2%	12%	3%	2%	8%
2001-2007	7%	-3%	0%	-3%	8%	5%	0%	3%	1%	0%	7%
2008-2012	27%	48%	28%	23%	15%	3%	10%	18%	15%	14%	18%
2013-2017	5%	2%	4%	6%	9%	12%	7%	-2%	7%	6%	8%

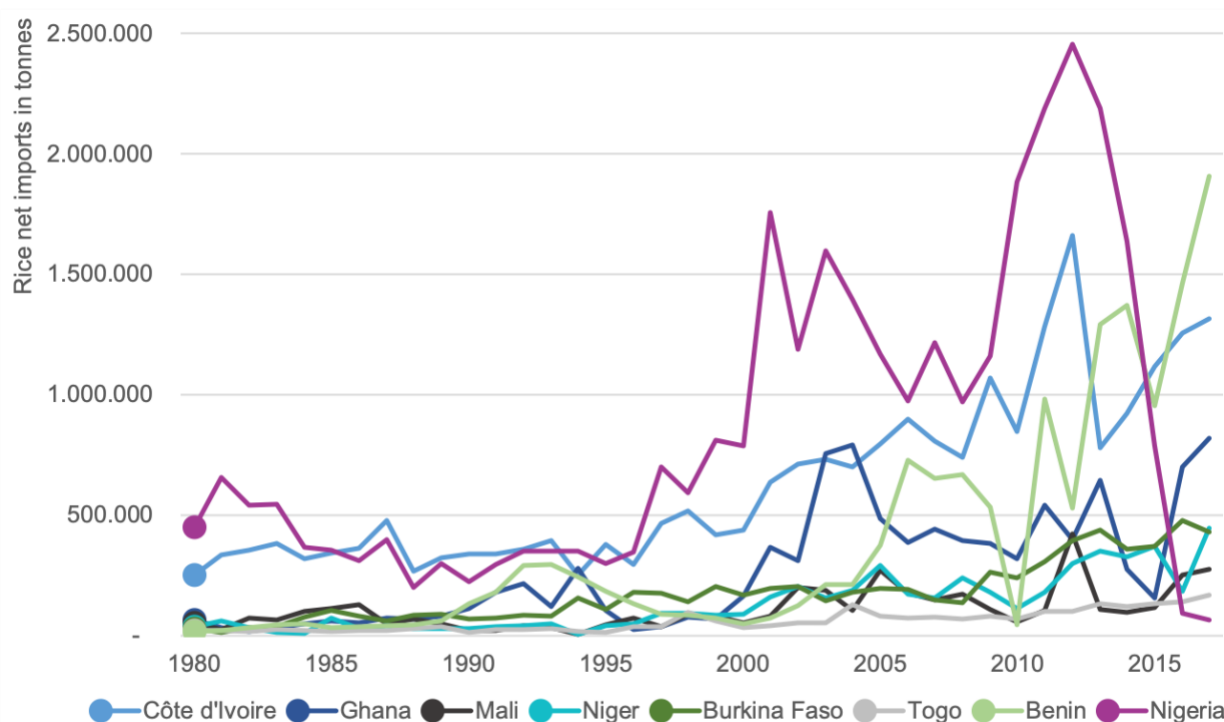
Source: FAOSTAT (2020).

Note: values in blue are five percentage points above the period average for all countries. Values in grey are five percentage points below.

2.4. Import dynamics

Overall, rice imports grew tremendously in the countries of the central and eastern parts of West Africa over the period 1980 – 2016, although inter-annual fluctuations were large (see Figure 5).

Figure 5. Rice net imports in West African countries, 1980 – 2017



Source: FAOSTAT (2020).

Net import volumes were modest before the SAPs. After those reforms, net imports began to rise more rapidly (see Table 4). In that period, import growth is observable in several WAEMU countries, including Burkina Faso, Mali, Niger and Togo, despite the devaluation of the CFA franc in 1994, which presumably made overseas rice imports less competitive relative to locally produced rice and other cereals.¹⁵ In Côte d'Ivoire, net imports show a marked upward trend following trade liberalisation reforms and the 1994 devaluation, while production was stagnating.¹⁶

In the first half of the 2000s, rice importation continued to grow at a fast pace, expanding by 14% annually for the eight countries as a whole. Coastal countries' net imports were the main driver of this trend. Then, following the food price crisis, net rice import growth reverted to the level of the 1980s and early 1990s. In Mali rice imports remained fairly stable after the 2008 crisis, except for a notable jump in 2012.

The fall in net official imports in Nigeria in the mid-2000s, following a decade of rapid import growth, while production was stagnant, is noteworthy. That happened under the second term of Olusegun Obasanjo's presidency. Between 2015 and 2016, Nigerian rice imports fell abruptly again, following the election of Muhammadu Buhari as President of the Federal Republic of Nigeria. However, this drastic drop in official imports in recent years does not

¹⁵ In Burkina Faso, for example, the government took measures to cushion the impact on consumer prices of the resulting rise in the cost of imported rice.

¹⁶ It should be noted that local currency devaluation or depreciation also increases the price of imported inputs and equipment, producing a negative effect on competitiveness.

take into account informal cross-border trade flows. It is noteworthy that, while imports for Nigeria were dropping, they increased sharply in Benin. These data mask substantial informal transshipments taking place between the two countries (see section 3.2.3).¹⁷

Table 4. Net rice import growth in West African countries (average annual growth rates, country weighted averages by period)

	Benin	Burkina Faso	Côte d'Ivoire	Ghana	Mali	Niger	Nigeria	Togo	All	Coastal	Sahelian
1980-1993	29%	17%	6%	14%	12%	45%	3%	9%	9%	7%	22%
1994-2000	-22%	19%	7%	39%	169%	125%	17%	31%	22%	11%	73%
2001-2007	50%	0%	10%	30%	38%	15%	15%	22%	19%	20%	17%
2008-2012	372%	27%	19%	3%	64%	24%	18%	8%	69%	75%	34%
2013-2017	41%	3%	1%	65%	12%	23%	-41%	12%	5%	4%	12%

Source: FAOSTAT (2019).

Note: values in blue are five percentage points above the period average for all countries. Values in grey are five percentage points below.

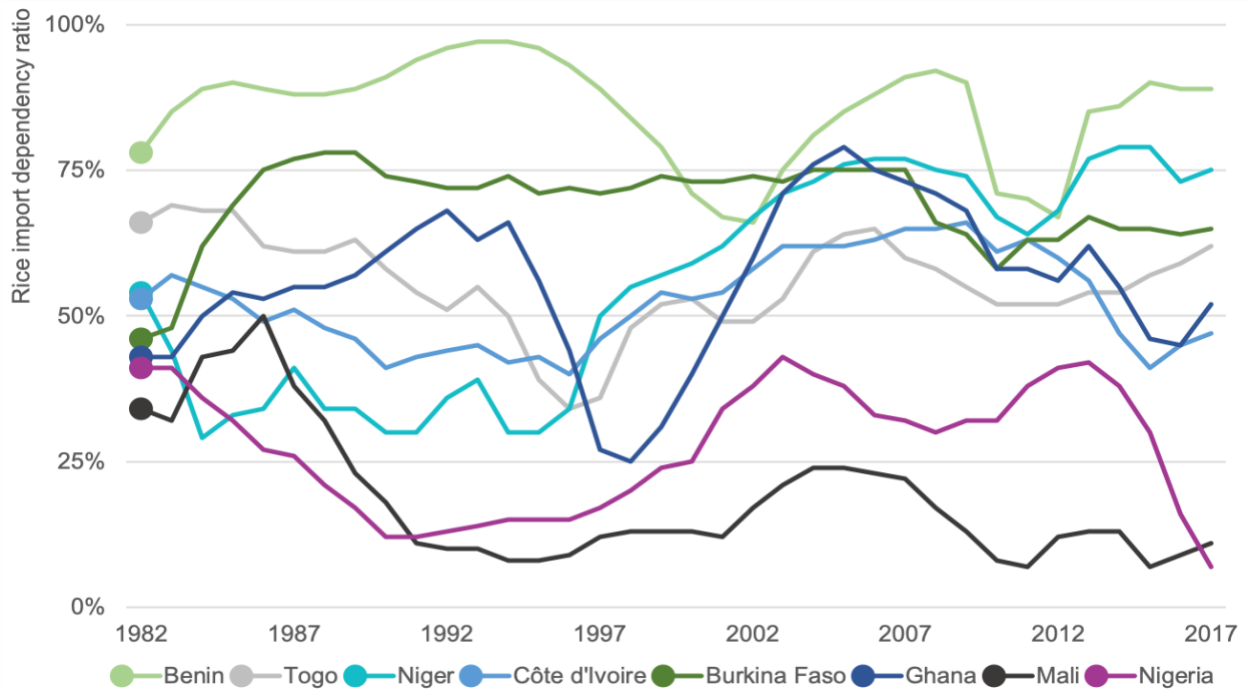
2.5. Import dependency

For the eight countries under consideration, rice import dependency estimated from official data is high on average (see Figure 6). **For Côte d'Ivoire, Burkina Faso, Ghana, Togo, Benin and Niger, the import dependency ratio has been above 50% for most of the time since 2000.** Only for Côte d'Ivoire and Ghana did the import dependency ratio fall in the 40-50% range in recent years. Mali and Nigeria show a different picture. **Mali's rice import dependency has remained relatively low since the 1990s, reaching 25% for the period 2014 – 2016.** In particular, although since the marketing year 2013/2014 domestic production has seemingly covered national rice requirements, Malian imports have continued to be significant. This apparent inconsistency can be attributed to measurement problems, including unrecorded cross-border trade flows (exportation of domestically produced rice or re-exportation of imported rice; Diakité and Bagayoko, 2014; Koné and Camara, 2018).¹⁸ **In the case of Nigeria, the import dependency ratio has hovered around the 30-40% range since 2000. In recent years Nigeria's ratio fell sharply.**

¹⁷ In addition, as mentioned earlier (section 2.1), large discrepancies exist between FAO and USDA data in the case of Nigeria, and this dramatic drop in imports reported by is not reflected in the USDA series (see Figure 24).

¹⁸ The coverage of consumption needs from national production is estimated from the population updated annually and the per capita consumption needs per year as defined by the Planning and Statistics Unit of the Rural Development Service (CPS/SDR and the National Institute of Statistics, INSTAT).

Figure 6. Rice import dependency ratios of West African countries, 1982 – 2017 (three-year moving average)



However, Nigeria's ratio shows a strange pattern, as it seems to roughly move in the opposite direction in comparison to Benin's ratio, with their imports having been of the same order of magnitude since around 2005. In other words, Benin and Nigeria's importation channels seem to operate as communicating vessels.

3. Sub-regional structures and dynamics of rice trade

In this section, after providing an overview of consumption patterns in West Africa and countries of focus (3.1), we examine the structures and the functioning of overseas rice supply chains (3.2) and cross-border trade in locally produced rice (3.3). We also briefly review the effects of climate change on rice production and trade (3.4).

3.1. Consumption patterns

As a general observation, rice is mainly consumed in urban areas in West African countries and the rice consumed by urban households is largely imported. **Yet, West African households consume many different types of rice.** Knowing what drives rice consumption choices is crucial for understanding rice trade patterns. The availability and the price of rice, the prices of substitutes for rice, and household income are key determinants of consumer demand. Consumer preferences also play a major role in determining rice consumption patterns. They vary greatly between and even within West African countries. They concern various attributes of rice: physical characteristics (degree of milling, proportion of broken grains, whiteness, foreign content matter and moisture content in particular); freshness; organoleptic qualities; origin; nutritional qualities; ease of preparation; packaging; and others. Consumer preferences are shaped by the social status of households, and by the geography, history and culture of populations (see Table 5).

Table 5. Rice consumption patterns in West African countries

	Rice consumption imported & West African rice	Imported types 2013-2017	West African types	Intrinsic properties	Willingness to pay	Cultural factors	Geographical factors
Benin	• 58% imported rice • 42% local rice	• 56% broken rice • 27% milled rice • 16% brown rice	Nerica	• Taste • Whiteness • Absence of foreign matters • Aroma	• Price premiums for upgraded local rice: 10% to 24% • Price premiums for imported rice: 42% to 75%	—	• Seaport (Cotonou) • Urban areas: high-quality white and aromatic rice • Rural areas: parboiled rice aromatic rice
Burkina Faso	• 59% imported rice • 42% local rice	• 57% broken rice • 40% milled rice	Bagre rice	• Taste • Absence of foreign matters • Swellness	• Price premiums for upgraded local rice: 10% to 25%	• Traditionally rice not an essential staple food and mostly consumed in urban areas, while rural populations consumes local cereals (millet etc) in addition to rice	• Close to primary center of origin (Inland Niger Delta) • Landlocked country: lower exposure to international rice market
Côte d'Ivoire	• 45% imported rice • 55% local rice	• 74% milled rice • 26% broken rice	—	• Taste • Whiteness • Absence of foreign matters • Aroma	• Price premiums for upgraded local rice: 15% • Price premiums for imported rice: 11%	—	• Seaport (Abidjan) • Imported broken rice and local rice consumed in rural areas • White long-grain and aromatic rice preferred in urban areas • Parboiled rice consumed in the North
Ghana	• 92% imported rice • 8% local rice	• 80% broken rice • 20% milled rice	—	• Taste • Cooking quality and time • Aroma	—	• Traditionally rice not an essential staple food but becoming a common one • Different regional traditional dishes so different types of rice preferred: Jollof rice (Accra), omo tuo or rice balls (Eastern region)	• Seaport (Tema) • North: consumers used to prefer parboiled rice but preference shifted to white rice
Mali	• 45% imported rice • 55% local rice	• 77% broken rice • 13% milled rice • 10% brown rice	Gambiaca	• Taste • Freshness	—	• Traditionally rice not an essential staple food • Strong attachment of urban consumers to local variety Gambiaca	• Landlocked country: lower exposure to international rice market • Inland Niger Delta: primary center for African rice domestication
Nigeria	• 20% imported rice • 80% local rice	• 82% milled rice • 11% broken rice • 7% brown rice	Ofada	• Taste • Whiteness • Absence of foreign matters • Aroma	• Price premiums for upgraded local rice: 8% • Price premiums for imported rice: 20%	• Rice given as gifts for holiday becoming a trend	• Seaport (Lagos) • North: rice flour • South: high-quality parboiled rice

Sources: Depieu et al. (2014), Sangare (2011), CIREF-Mali (2013), ITC (2019), Sainozou (2016), UNPR-B and VECO-WA (2014), Rutsaert, Demont and Verbeke (2011), Fiamohe and Kinkpé (2016), Tetteh Anang et al. (2011), Demont and Ndourb (2014), Ayeduvor (2018), Demont, Fiamohe and Kinkpé (2017), and Fiamohe et al. (2018).

It has been observed that, **within West African countries, the market share of locally produced rice increases with the distance to the main seaports** (Fiamohe *et al.*, 2018). That follows a general pattern whereby in countries where the primary urban centre is a seaport, with relatively easy access to food imports, food consumption among the non-agricultural population is largely made of imported products. Also, **in cities close to current rice production zones and areas where rice was historically cultivated, consumers usually have a preference for locally produced rice**, for example, in the inland delta of the Upper Niger River (Demont *et al.*, 2017).

Markets in West African countries are usually dominated by long-grain white rice, although, in some countries, consumers prefer parboiled rice or broken rice. In parts of Mali, northern Côte d'Ivoire, northern Ghana, parts of Benin, and southern Nigeria, parboiled rice is preferred over white rice. Broken rice, a by-product of rice processing that is much cheaper than long-grain rice, is generally seen as an inferior product by consumers. For example, in Mali, low-income households largely consume low-cost, imported broken rice, which has a high swelling rate.¹⁹ High-end, imported whole-grain rice is instead consumed by a small part of the population, made up of senior civil servants, private sector executives, and expatriates from industrialised countries. High-end rice is sold in supermarkets, in packages of two to five kilogrammes (kg), between 900 and 1,750 CFA/kg (Diakité and Bagayoko, 2014; Koné and Camara, 2018). **To analyse rice trade, it is useful to distinguish between two main markets for imported rice, the low-cost and the high-end markets.**

Consumers are increasingly sensitive to the organoleptic qualities of rice. The market for aromatic rice is fast-growing, for example in Ghana, where urban households have become one of the largest consumers of aromatic rice in West Africa (Rutsaert *et al.*, 2011). **A more general trend is the diversification of rice products in West African markets, especially in the more affluent urban centres** (in Ghana and Côte d'Ivoire, for example). In Accra, Ghana, the 5% broken non-aromatic Thai rice remains the dominant product in the market, and the aromatic Thai jasmine rice attains a market share of about 20% among imported rice products. Wholesalers in the capital city typically offer more than a dozen types of rice products, including Asian rice, US long-grain rice and locally produced brown rice.

Although many surveys have shown that locally produced rice often fails to meet consumers' expectations (especially regarding the degree of milling, whiteness and foreign content matter) and is seen as being of lower quality than imported rice, in several cases varieties of locally produced rice have distinctive qualities that consumers appreciate. That is the case notably for Gambiaka rice in Mali and Ofada rice in Nigeria (Rutsaert *et al.*, 2011). In Mali, locally produced Gambiaka white rice and also parboiled white and red rice are very popular. Another important variety of rice produced in Mali is RM40 (for 40% broken rice), which is sold between 375 and 400 CFA/kg (Diakité and Bagayoko, 2014; Koné and Camara, 2018). The typical Malian consumer has a preference for the Gambiaka variety because of its good taste and culinary value. When locally produced rice is homogeneous, without impurities and well packaged, consumers are disposed to choose it over imported rice (Diakité and Bagayoko, 2014; Koné and Camara, 2018). **That indicates that quality enhancement, differentiation and targeted marketing, in various dimensions, are critical for locally produced rice to compete with imported rice.**

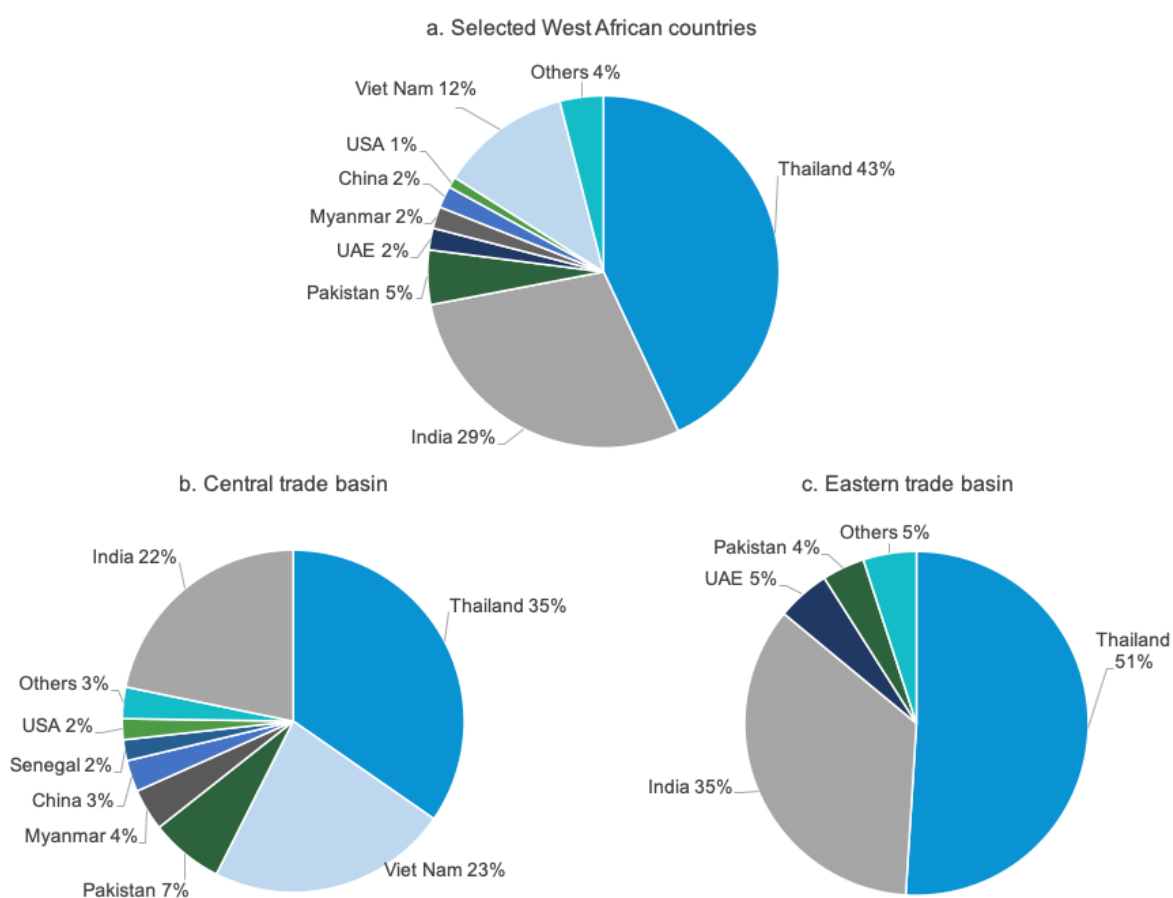
¹⁹ Flavored broken rice, often imported from Thailand, is very popular as it has a taste similar to that of high-end rice (Diakité and Bagayoko, 2014).

3.2. Overseas rice importation systems

3.2.1. Import flows

The eight West African countries under consideration mainly import rice from Thailand and India: between 2013 and 2017, more than 70% of West African rice imports came from these two Asian countries. Imports in the central trade basin are more heterogeneous in terms of origin: more than half of the rice imports originated from Thailand and India, but Vietnam accounted for 23% of them. Five other exporting countries had import shares of more than 1%. In the eastern trade basin, fewer countries supply the bulk of rice imports: Thailand and India account for almost 90% of imports, while only two other exporting countries have an import share above 1% (see Figure 7).

Figure 7. Rice imports in (a) eight selected West African countries and in (b) the central and (c) the eastern trade basins, by origin, 2013 – 2017



Sources: FAOSTAT and ITC (2019).

For these eight countries, rice imported from Asia is mainly shipped to the ports of Lomé in Togo, Tema and Takoradi in Ghana, Cotonou in Benin, and Abidjan in Côte d'Ivoire. Recent figures on rice import and export flows passing through these ports show that: 34% of imports and 55% of exports go through Lomé; 31% of imports and 25% of exports through Cotonou; 15% of imports and 20% of exports through Abidjan; and 20% of imports and a negligible share of exports through Tema (Nathan Associates, 2013, in FEWS NET, 2017). Import flows through Abidjan, which had fallen off sharply during the period of the political and military crisis in Côte d'Ivoire, have since increased again. However, they still have not reached their pre-crisis levels (FEWS NET, 2017). In the case of Mali,

during the period of crisis in Côte d'Ivoire, rice imported in Mali was essentially coming from the ports of Dakar and Conakry (CILSS, FAO, FEWS NET and WFP, 2010).

Large quantities of imported rice are transported throughout the region, in particular to supply landlocked Sahelian countries. Rice is usually delivered to West African ports by ships transporting up to 30,000 tonnes (t) of rice, for several importers and various destinations in the sub-region. In the case of Burkina Faso, for example, imported rice can be shipped from Abidjan to Bobo-Dioulasso and Ouagadougou by train or by truck. At the destination, the rice is offloaded and stored in warehouses belonging to the importers or the chamber of commerce. Then the rice is sold to wholesalers and semi-wholesalers (FEWS NET, 2017; CIR-B and VECO-WA, 2015).

3.2.2. Import patterns

Rice is not a homogeneous commodity. Rather it consists of a wide range of rice products that vary according to aroma, level and nature of processing (brown, white, polished, parboiled, flour), grain length and kernel shape (slender long-grain Indica, medium grain, or round grain Japonica), percentage of broken grains, colour, chalkiness and translucency, homogeneity and cleanliness, freshness, dryness, taste and starch level, cooking qualities (e.g., swelling capacity, cooking time, stickiness) and branding and packaging (bulk versus packaged; USAID, 2009).

In Burkina Faso, the vast majority of the rice imported is over-aged buffer stock from Asia (at least 7-year old, with some batches going up to 20 years), and is therefore very dry. This seriously reduces the nutritional quality of rice. Some consumers appreciate this dryness because it makes the rice inflate greatly (25-30% more than fresh local rice) during cooking, effectively reducing the price by that same percentage while still 'filling the plate' (BMGF, 2012). It is imported by large traders and is more easily accessible for urban consumers in Bobo-Dioulasso and Ouagadougou.

In Mali, the composition of imported rice shows a preponderance of broken rice, which accounts for 59% of total rice imports. In the last three years (2015 – 2017), broken rice represents more than 73% of the total volume imported. The composition of rice differs according to origin and period. Thus, before the 2008 crisis, imports from India were 47% broken. On the other hand, since 2008, Mali imports almost exclusively broken rice from India, that is to say 100% between 2009 and 2011 and 92% between 2013 and 2017. For Thailand, the structure is different. In fact, rice from this country was composed of 86% broken rice in the period 1997 – 2011. On the contrary, between 2011 and 2017, broken rice represents only 44% of the volumes imported from this country. Quantities imported from Pakistan vary in composition from year to year, while imports from Brazil are almost entirely broken (INSTAT, 2019).

In Benin, different grades of rice are imported ranging from the more expensive fragrant (Thai) rice, U.S. rice, and parboiled rice to the much cheaper 70% broken rice, but also 5, 10, and 35% broken rice.

Table 6 shows trends in imports of different categories of rice. **One notable fact is the increasing import share of broken rice over the past 10-15 years, in Benin, Burkina Faso, Mali, Nigeria and Togo. That could indicate that the structure of West African imports has somewhat shifted to lower quality rice.** Rising prices of overseas rice, combined with the generalisation of rice consumption among low-income households, may have driven this trend.

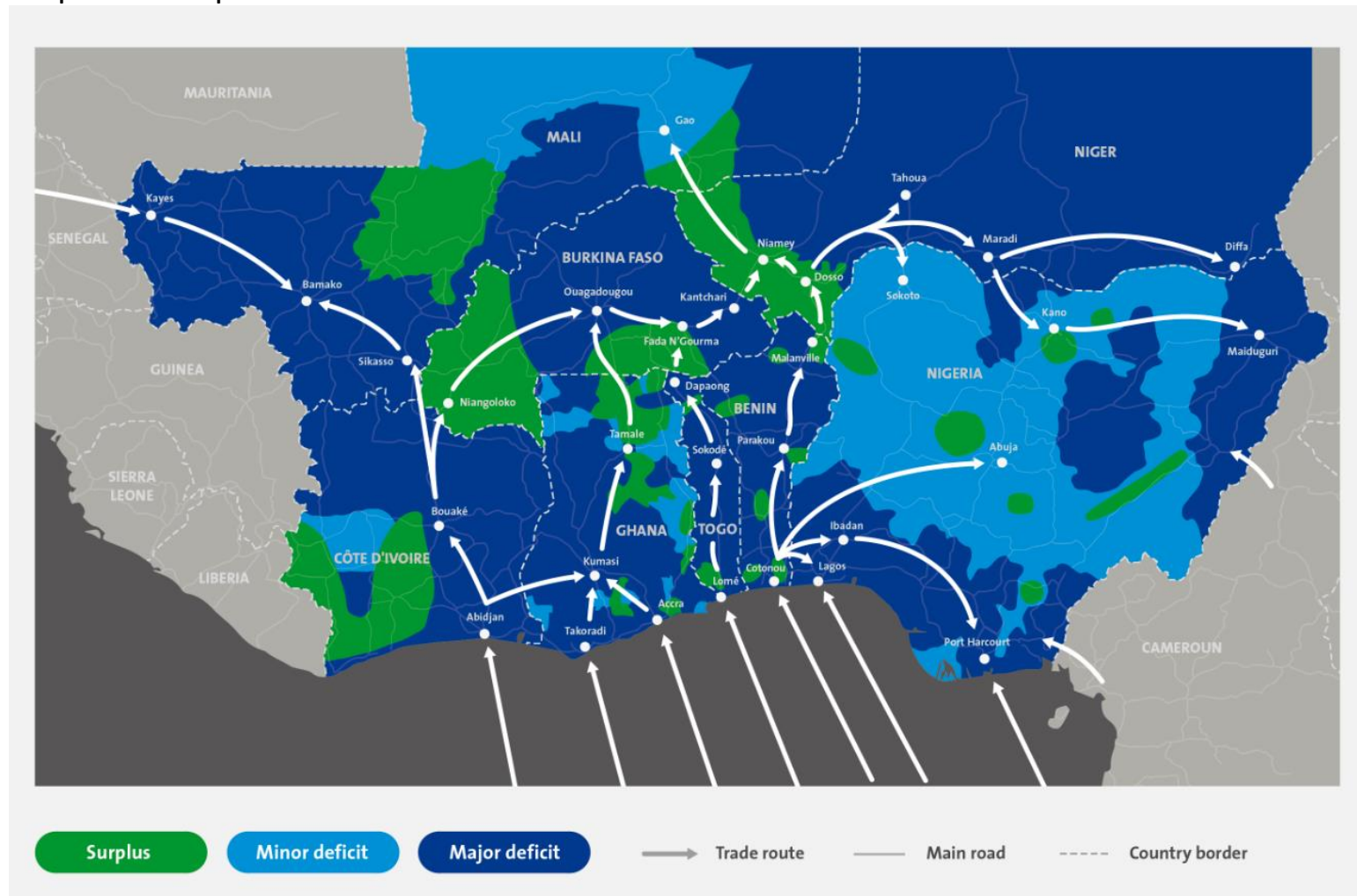
Table 6. Import shares by type of rice and origin

	2003-2007				2013-2017			
	Types	Share by type	Main exporters	Share by exporter	Types	Share by type	Main exporters	Share by exporter
Benin	Semi-milled/ milled rice	98%	Thailand	53%	Semi-milled/ milled rice	27%	India	36%
			Switzerland	15%			Thailand	33%
	Broken rice	2%	Thailand	28%	Broken rice	56%	India	49%
			China	28%			Thailand	39%
Burkina Faso	Semi-milled/ milled rice	46%	China	27%	Semi-milled/ milled rice	40%	Thailand	39%
			India	26%			India	30%
	Broken rice	52%	Thailand	25%	Broken rice	57%	Thailand	53%
			India	24%			India	27%
Côte d'Ivoire	Semi-milled/ milled rice	79%	Viet Nam	29%	Semi-milled/ milled rice	74%	India	28%
			Thailand	20%			Viet Nam	26%
	Broken rice	20%	Thailand	94%	Broken rice	26%	Thailand	76%
			Pakistan	2%			Viet Nam	12%
Ghana	Semi-milled/ milled rice	14%	Thailand	84%	Semi-milled/ milled rice	20%	Thailand	48%
			USA	7%			Viet Nam	28%
	Broken rice	86%	Thailand	31%	Broken rice	80%	Viet Nam	68%
			Viet Nam	29%			Thailand	15%
Mali	Semi-milled/ milled rice	42%	India	49%	Semi-milled/ milled rice	13%	Pakistan	52%
			Pakistan	15%			Thailand	27%
	Broken rice	56%	India	34%	Broken rice	77%	India	49%
			Thailand	22%			Pakistan	21%
Niger	Semi-milled/ milled rice	98%	India	24%	Semi-milled/ milled rice	89%	Thailand	59%
			Thailand	21%			India	19%
	Broken rice	1%	Thailand	68%	Broken rice	4%	Thailand	62%
			Viet Nam	9%			India	20%
Nigeria	Semi-milled/ milled rice	89%	India	40%	Semi-milled/ milled rice	77%	Thailand	85%
			Thailand	38%			India	7%
	Broken rice	11%	India	37%	Broken rice	21%	China	82%
			USA	30%			Thailand	15%
Senegal	Semi-milled/ milled rice	1%	India	67%	Semi-milled/ milled rice	1%	Thailand	70%
			Thailand	25%			India	15%
	Broken rice	98%	Thailand	54%	Broken rice	99%	India	62%
			India	15%			Thailand	18%
Togo	Semi-milled/ milled rice	27%	China	25%	Semi-milled/ milled rice	14%	Thailand	62%
			Thailand	21%			India	20%
	Broken rice	53%	India	26%	Broken rice	66%	Thailand	51%
			Thailand	19%			India	30%

Source: ITC (2019).

3.2.3. Transshipment flows

Figure 8. Rice import and transshipment flows in West Africa



Source: Adaptation from FEWS NET maps and authors' own research.

In principle, the transshipment of imported rice can take place legally. After being shipped to a West African port, imported rice can be transported throughout the region, in particular to supply landlocked Sahelian countries. **However, in several cases, imported rice crosses borders illegally (or, informally),** evading customs duties and regulations (Golub, 2015). Figure 8 represents the main transshipment routes for both formal and informal flows.

The case of rice imported in Benin and illegally re-exported to Nigeria on a large scale is well-known (Golub, 2012). **Estimates suggest that up to 85% of Beninese imports are re-exported to Nigeria through highly ramified smuggling networks over which the two states have little control** (Soulé and Yérima, 2011; Afouda, 2013).^{20, 21} Based on this estimate, in 2017, 1,621,789 t of rice would have been smuggled into Nigeria through Benin. In an effort to halt smuggling, Nigerian authorities enforced a partial closure of borders with Benin in August 2019 (see section 4.3.3 for an analysis of the impact of this measure).²²

Several Beninese localities serve as trade hubs in the Benin-Nigeria basin. These include old cities that perpetuate traditional commercial activities despite the border between the two countries. Foreign exchange dealers operating in the informal sector facilitate transactions between sellers and buyers of rice destined to Nigeria. Situated on the Abidjan-Lagos corridor and near the border with Nigeria, the Sèmè-Kraké complex is the largest centre of currency trading in Benin, dealing with important quantities of major currencies including the euro, US dollar, yen, pound, and so forth. Next come Cotonou (the Dantokpa market in particular) and the *communes*²³ of Ifangni, Porto-Novo, Ouesse, Parakou and Malanville. Although they play large roles in the trade with Nigeria, the other *communes* have fewer foreign exchange dealers.

Yet, most Beninese *communes* that share a border with Nigeria are concerned by the re-exportation of rice to Nigeria. The volumes transhipped vary according to the strategy of the actors involved, the economic geography (proximity to the border, nature and state of roads, number and size of agglomerations located on the other side of the border, and so forth) and other factors. **The *communes* of Sèmè-Kpodji and Malanville are the two main crossing points for re-export flows of rice from Benin to Nigeria.** The case of Malanville is interesting because of its geographical position, in the extreme north of Benin (about 700 km from the coast). Despite the additional costs of transportation, traders have made this town an important platform for re-exporting rice to Nigeria. Re-exported rice shipments often go through Niger and then Nigeria. The nearby locality of Iloua constitutes the biggest exit post. The *communes* of Pobè, Adjara, Ouesse, Kétou, Porto-Novo, Savè and Tchaourou also benefit from this trade, operated by local networks of traders and services providers.²⁴

In the Benin-Niger-Nigeria trade basin, **transport and logistics costs are a key factor in (formal or informal) transshipment of overseas rice, apart from differences in tariffs and other trade regulations between countries.** Besides frequent import bans, high transport and logistics costs in Nigeria encourage importers and traders to carry Asian rice through Benin and Niger. These high costs are due to several factors: bottlenecks at the ports of Lagos, Port Harcourt and Calabar; high transaction costs and clearance fees; difficult transport between ports and inner

²⁰ Different estimates of the proportion of Beninese imports illegally re-exported to Nigeria have been reported. In 2015, it was estimated that more than 50% of Beninese imports were smuggled into Nigeria—that was around the time when the Nigerian government began to tighten controls on rice smuggling (International Grains Council data, 2016). A recent newspaper article reported that the rate of smuggling was 80% (Toulemonde and Grandin, 2019). A report by the USDA Foreign Agricultural Service (2013) suggests that, as 75-85% of the rice imported to Benin is parboiled—not the white rice mainly consumed in Beninese urban centres—it is likely that the entirety of parboiled rice imported in Benin is actually re-exported to Nigeria, transiting through Niger.

²¹ The Nigerian territory is crossed by more than 1,400 illegal routes which remain yet to be controlled by both the Nigerian authorities and Benin customs officers along the border.

²² The border closure is still in place at the time of the publication of this report (October 2020).

²³ A *commune* is the second-level administrative unit in Benin.

²⁴ Based on field interviews conducted by the Laboratoire d'analyse régionale et d'expertise sociale (LARES) in 2018 – 2019.

cities (Abuja, Kaduna, Kano and others). In contrast, Benin, with the port of Cotonou and a good management of its road network, offers the Nigerian traders a more efficient “logistics platform” to reach Nigerian consumer markets (in addition to circumventing high tariff charges). For instance, the Beninese administration largely eliminated the checkpoints and road transportation delays are the lowest in the region (ECDPM, IPAR and LARES, 2019).

Revenues and profits from the legal transshipping and the smuggling of imported rice between Benin and Nigeria are shared between a complex network of public and private actors on both sides of the border. **For these actors, cross-border trade, including the re-exportation of rice, is part of an economic model based mostly on deeply rooted informal practices.** Those actors include the central state, local authorities, customs authorities, traders (importers, wholesalers and retailers), transporters, currency dealers and others. Municipalities receive a fair share of the revenues linked to rice transshipments, through customs duties and less formal channels. Importers and wholesalers—both Nigerians and Beninese—often use storekeepers for the storage of the imported products and several types of carriers²⁵ for the distribution to major consumption markets. In recent years, because of stronger restrictions or the prohibition of rice importation into Nigeria, importers and wholesalers have implemented new strategies in border areas to circumvent those barriers. They built large warehouses and shops (15 to 30 m²) in border areas, where they constitute sizable stocks of imported rice of various brands.²⁶

Beninese traders bring in rice shipments based on orders from their Nigerian counterparts. Rice is shipped to the port of Cotonou, where it is stored before reaching local markets or being shipped to other countries in the region.²⁷ The storage capacity of the Cotonou Autonomous Port is very large, but most of the imported rice spends relatively little time in wholesalers' warehouses in the city. The major importers bring in both white and parboiled rice. Local wholesalers purchase the white rice for domestic distribution and repack it into 25 kg bags for retail sale. Wholesalers also buy parboiled rice and sell it to Nigerian traders who then organise the transportation by truck and the shipping across the border (USDA, 2013). In the southern part of Benin, the majority of buyers are Nigerian and Beninese women (restaurant owners and small-scale rice retailers) living in Nigeria. They disguise the rice bought in cloth bags to bring the product to Nigeria, or hire hawkers (paying them 600 Nigerian nairas, or 900 to 1,000 CFA francs per 50 kg bag) to take alternative routes and bypass the busiest roads. Once the border is crossed, rice shipments are reconstituted for the transportation of the refurbished bags to several consumption centres in Nigeria. Often, the complicity of border surveillance and security agents is required.²⁸

An important factor to consider in the analysis of rice trade dynamics between Benin and Nigeria is monetary policy, which affects exchange rates and thus the price of imported rice. Nigeria has a non-convertible currency, the naira, while Benin uses the CFA franc, whose convertibility is guaranteed by the Bank of France. Because of the difficulty traders have in exchanging foreign currencies through commercial banks, a parallel foreign exchange market has developed, often disrupting monetary management of the naira by the Central Bank of Nigeria (CBN). In fact, on this parallel market, the Nigerian naira is often discounted with regards to the parity fixed by the CBN between the Nigerian naira and other currencies (notably the euro, which has a fixed parity with the CFA franc). The parallel foreign exchange market continues to predominate despite the CBN's decision to work only with a dozen large currency traders. In recent years, economic difficulties linked to international oil prices (crude oil contributes about 65 to 70% of export earnings in Nigeria) have put downward pressure on the naira against the CFA franc and

²⁵ Carriers are distinguished according to the characteristics of their means of transport. We distinguish truckers, two-wheelers and three-wheeled carriers. Truck drivers have 15 to 30 t capacity trucks and/or 3.5 to 6.5 t commercial vehicles. Two-wheelers use Bajaj, Kawasaki, Suzuki, Yamaha, etc. motorcycles on which they load an average four to five 50-kg bags of rice. Three-wheeled carriers can load between 10 and 15 50-kg bags of rice.

²⁶ Brands traded include ‘3 Good Special’, ‘Africa Princess’, ‘King, Royal Thai’, ‘Agric’, ‘Agric Mayur’, ‘Cape’, ‘Moti’, ‘Ariana’, ‘My Choice’ and others.

²⁷ Sometimes rice imports shipped via Cotonou and destined to Nigeria are declared as imports destined to the hinterland countries, so as to be exempt from certain consumption taxes (Noutahi, 2018).

²⁸ Based on field interviews conducted by LARES in June-July 2019.

other currencies. In June 2016, when the CBN set the rate of 199 nairas per US dollar, US currency was scarce on official markets. On the parallel market, the value of the Nigerian currency fell to 350 nairas per US dollar in 2017. A similar situation was observed in terms of the exchange rate with the CFA franc. While in 2012 1 naira was worth between 3.04 and 3.20 CFA francs, in 2018 its price oscillated between 1.42 and 1.72 CFA francs, a depreciation of 44.4 to 55.6% in the parallel market during the period.²⁹ **This depreciation of the Nigerian naira has contributed to reducing the competitiveness of agricultural products** from neighbouring countries and the international market, including rice, in Nigeria. Yet, despite the resulting increase in the prices of these products on the parallel market, Benin's re-exports of rice to Nigeria have continued with relatively high annual volumes.

Rice re-exportation and smuggling in the case of Benin and Nigeria is unique in terms of its scale, but it is not the only case. Informal re-exportation to Nigeria also happens through Cameroon and Niger (OCISCA, 1995). In addition, **considerable volumes of rice entering Côte d'Ivoire are re-exported to neighbouring countries, especially Ghana,** either legally or illegally, depending on policies in effect at a certain moment (Traore, 2018). That can sometimes be seen in the official trade data, deducted from the fact that the sum of quantities produced domestically and imported far outstrips domestic consumption needs, or reported by economic operators in interviews. The illegal transshipment of overseas rice between Côte d'Ivoire and Ghana would amount to roughly 100,000 t annually (FFI and GAIN, 2016c). In Burkina Faso, an official of the trade ministry indicated that informal imports of overseas rice would not represent more than 5% of total imports.³⁰

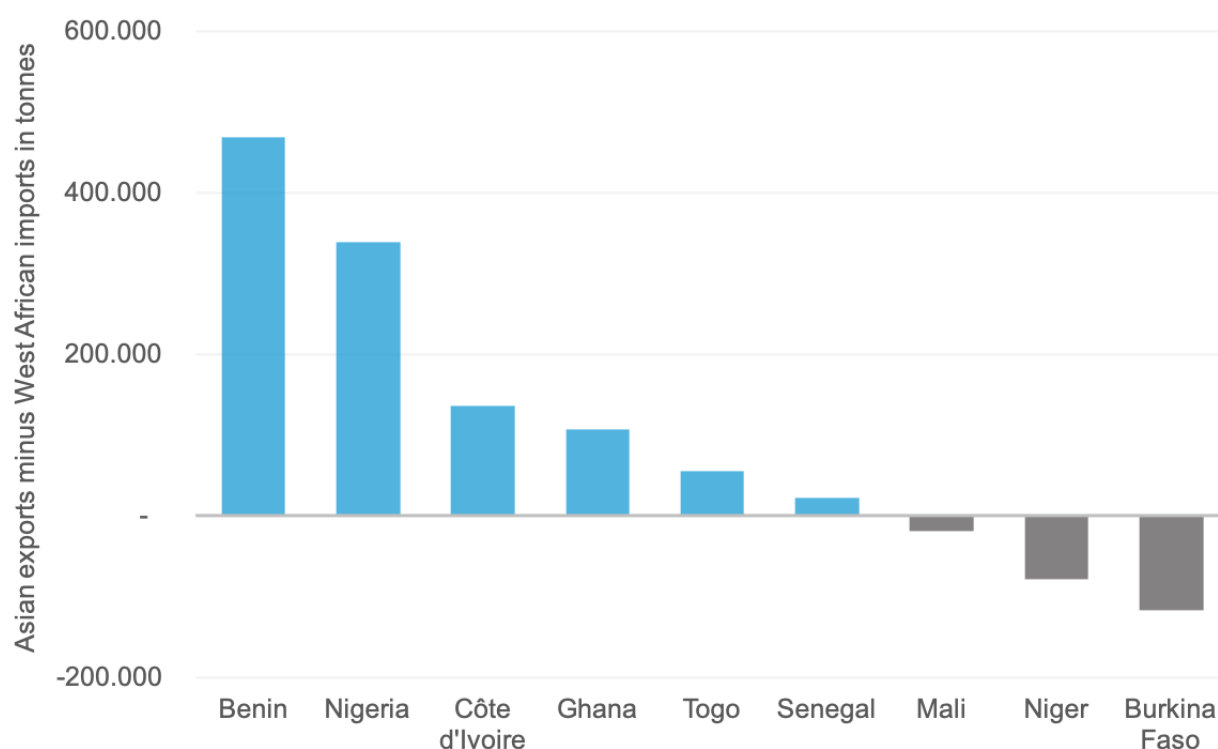
3.2.4. Import data discrepancies

To better understand potential trade flow measurement issues related to (legal and illegal) transshipments, we took the ITC data on annual imports of each of the West African countries of focus from each of the main exporting countries, and the data on annual exports declared by those same exporting countries to the West African countries. We then calculated the difference between the latter and the former (that is, exports of Asian countries and other exporters to West African countries minus imports of the latter from the former). The average annual trade differentials obtained are shown in Figure 9 below (the annual values obtained were averaged over the period 2013 – 2017 to obtain more representative figures).

²⁹ Based on data from the ONASA *Système d'Information sur les Marché*, 2018.

³⁰ ECDPM field mission, April 2019.

Figure 9. Average difference over a five-year period between Asian exports to West Africa and West African imports from Asia, 2013 – 2017



Source: ITC (2019).

Notes: exporting countries are China, India, Myanmar, Pakistan, Singapore, Thailand, United Arab Emirates, United States and Vietnam. Importing countries: Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal and Togo.

When the differential is positive, Asian exporting countries are declaring more trade flows than West African importing countries. As the figure shows, for all coastal countries, the differential is positive, meaning that **Asian exporter declarations overestimate the imports of West African coastal countries. The discrepancy is most pronounced in the case of Benin and Nigeria.** In contrast, **Asian exporter declarations tend to underestimate the imports of West African Sahelian countries.** Overall, the larger differential for coastal countries as a whole appears consistent with frequent reports of rice production overestimation and consumption underestimation in several West African countries.

There are several possible explanations. The most likely cause of those differentials is that once orders have been issued to Asian exporters and rice has been shipped to West Africa, importers in West Africa may reallocate and legally tranship part of their shipments from coastal countries to Sahelian countries because it is more difficult to know in advance the demand in the latter countries, inventories of local distributors in these countries are smaller, and so transactions are conducted with shorter lead times. Hence the imported quantities recorded by coastal countries' administrations would be lower than those recorded by Asian administrations. That would also explain why differentials are negative in Sahelian countries. Or, in cases where intermediaries located in coastal countries buy Asian rice to then re-export it in Sahelian countries, Asian administrations might just record such transactions as exports to the former countries, while the administrations of these countries do not record them as imports.

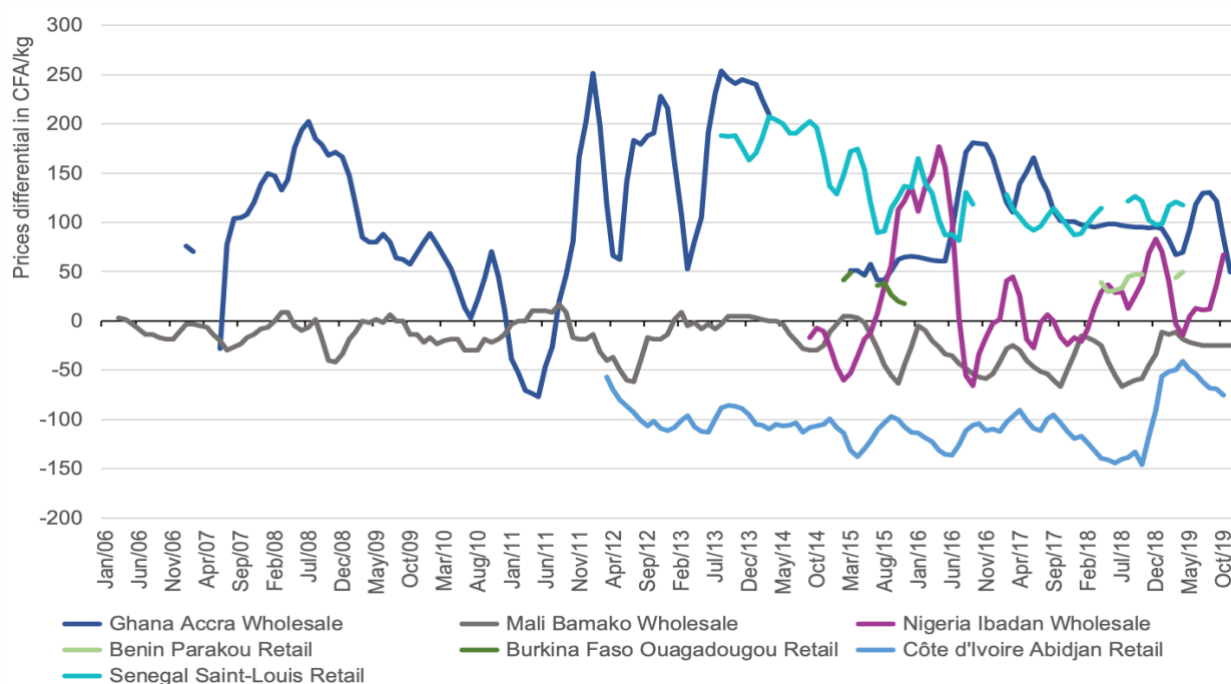
Yet, it could be that in some particular circumstances, coastal countries' administrations underreport rice imports, either involuntarily or voluntarily. Hypothetically, they would do so to avoid publicising the full extent of their countries'

rice import dependency; or to exempt the part of unrecorded imports from legal levies while possibly obtaining unreported payments from importers. Similarly, coastal countries' administrations might underreport rice imports to avoid that rice destined to be re-exported informally to neighbouring countries appears in official trade statistics.

3.2.5. Price patterns³¹

Following the 2008 crisis, international rice prices remained higher than in the years before. Generally, the same can be said of prices for imported rice in reference markets in the countries of focus, which has implications for the relationship between the price of the latter and that of locally produced rice. **In recent years, in several of these reference markets, for example in Ghana, imported rice prices have been higher than locally produced rice prices** (see Figure 10). This observation is consistent with the fact that it has been possible to see in supermarkets as well as street markets locally produced rice, of different quality grades priced below imported rice products. **Pricing patterns were notably different in the 1980s and 1990s when state-controlled rice imports and collected levies on them** (through the *caisses de péréquation* in francophone countries). Back then, **imported rice prices were generally lower than the prices of locally produced rice**. This trend may be due to the expansion of rice output in West African countries that has put downward pressure on prices. The fact that the quality of local rice has generally not progressed as much as the quantity produced (although there are exceptions) and that the development of distribution channels is lagging (while urban consumers have increasingly discerning preferences for rice) has probably contributed to it too. In the case of Ghana, the depreciation of the local currency in the 2010s contributed to the increase in the price of imported rice in the domestic market. In Mali, however, the positive differential between the price of locally produced and that of imported rice has increased after the 2008 crisis.

Figure 10. Three-month moving average rice price differentials (imported rice minus locally produced rice) at the wholesale or retail level in major West African urban centres, 2006 – 2019



Sources: for wholesale prices GIEWS (2019) and for retail prices FEWS NET (2019) except for Côte d'Ivoire (GIEWS).

³¹ We obtained rice price data from several databases. International market prices were sourced from the World Bank 'Pink Sheet', which contains monthly reference prices (for Thai 5% and Thai 25%). For markets within West Africa we used price data from the Famine Early Warning Systems Network (FEWS NET), the FAO Global Information and Early Warning System (GIEWS) and CILSS. These three databases are complementary in terms of geographic, rice type and marketing stage (assembly, wholesale and retail) coverage. By using these three sources, we were able to get a fuller picture of pricing dynamics in different parts of the region.

3.2.6. Overseas rice supply chain dynamics

Importers, who are also wholesalers, play a major role in the supply chain for imported rice. They are the real “originators”. The rice importation sector in West African countries is generally highly concentrated. The importation and wholesaling of rice generates small margins and requires operating at a large scale. Importer-wholesalers operate as part of networks of smaller wholesalers, retailers and other intermediaries, over which they hold more or less control depending on the country. In some countries, the importation sector has become nearly monopolistic, which reinforces importers’ control over the supply chain and is conducive to different types of anticompetitive market outcomes. International traders supplying West African importers are mostly very large corporations. They include Louis Dreyfus Company, Phoenix Commodities (which was liquidated in 2020 amidst the market turmoil caused by Covid-19), Olam, Ameropa (although it is reportedly reducing its involvement in rice trading in West Africa), SAT Swiss Agri-Trading, CIC Group, ETG (which recently entered this market) and a few other midsize and smaller rice traders catering to niche markets.³²

In **Burkina Faso**, only a few importers, who are in a financial position to pass orders of 1,000 t or more and who have access to large warehouse facilities, are able to meet the import requirements. Approximately 40 importers are active in Burkina, almost all based in the capital Ouagadougou, but only about ten are major importers. The three largest account for more than 70% of all rice imports. The import capacity of these traders varies, with some importing between 30,000 and 50,000 t per year each, out of a total of approximately 200,000 t worth of rice imports annually. The main rice suppliers for these importers are large multinational trading companies such as Cargill, Dreyfus, and so forth (FEWS NET, 2017). In **Ghana**, four major rice importers used to make up about 75% of national imports. These were Taj Investments, Stallion Group (based in Dubai and with a presence in several West Africa countries), CCTC (part of Ghana’s largest agribusiness company, Finatrade) and Olam. Several small importers supply about one-quarter of Ghanaian rice imports. The rapid devaluation of the Ghanaian cedi between 2013 and 2014 resulted in large revenue losses for some major importers and the exit of some operators (FFI and GAIN, 2016c). In **Mali**, a handful of large importers supply the domestic market and public buyers with overseas rice (Mees, 2015). The *Grand Distributeur Céréalière du Mali* (GDCM) is the largest importer, with 50% of the market share for imported rice in recent years (FFI and GAIN, 2016d).

In **Côte d'Ivoire**, the imported rice market has become almost monopolistic following the disintegration of the domestic sector after the structural adjustment programmes. One major importer (*Société de Distribution de Toutes Marchandises en Côte d'Ivoire*, SDTM-CI) dominates the market both for imports of 15-35% broken rice (which represent 64% of total rice imports) and for greater-than-35% broken rice (31% of total rice imports).³³ For the higher quality rice (less than 15% broken), other importers, such as the *Compagnie d'Investissements Céréalières* (CIC) and Olam have significant market shares (together they account for about half of imports in this category). In the early 2000s, as the Ivorian politico-military crisis was unfolding, the rice import supply chain underwent a shift as importers vertically integrated distribution channels from port to retailer. Eventually, the SDTM-CI gained a *de facto* monopoly, acting at the same time as an importer, wholesaler, semi-wholesaler, retailer, freight forwarder and handler (Traoré, 2018). That has affected consumer prices, in particular leading to price discrimination between different regions and retail outlets.

In both **Benin** and **Nigeria**, the rice market is dominated by a few powerful companies originating from different communities. In Benin, the rice importing sector is made of a handful of large companies importing rice in bulk. Four

³² Indicatively, Louis Dreyfus Company, Phoenix Commodities and Olam supplied approximately 2, 1,5 and 1 million t to the African market in 2018 (pers. comm. with a rice trader, October 2019).

³³ SDTM-CI accounts for 55% of all imports over 1995 – 2018. Specifically, the company accounts for 56% of 15-35% broken rice imports, and for 60% of greater-than-35% broken rice imports (Traoré, 2018). SDTM-CI is mainly supplied by Louis Dreyfus Company (FFI and GAIN, 2016b).

companies control about 75% of rice imports: Difezi, a long-time Beninese importer, now intensely competes with international operators that have established locally or partnered with local operators, notably Olam and the Stallion Group (FFI and GAIN, 2016a). In Nigeria, the Stallion group is the largest rice importer, followed by the Dangote Group and the Elephant Group (Ayinde, Kwaghe, Agbibo and Jijji, 2016). Olam too supplies rice to Nigeria.

The rice importation sector in West Africa is heavily influenced by international market factors. International trade in rice is growing mainly due to rapidly increasing demand outside Asia. Nonetheless, 85% of the rice produced worldwide is still consumed in Asia, meaning that the world rice economy is still essentially Asian, due to high per capita consumption rates and large populations. Asia also heavily dominates the supply as the continent represents 90% of world production. Thus, only 7% of rice harvested worldwide is traded internationally (Lançon and Mendez del Villar, 2008; Stratfor Worldview, 2017).

The world export supply is concentrated among six exporting countries: Thailand, Vietnam, India, the United States, Pakistan and China. These countries represent 85% of world exports. Remaining exports originate from Egypt, Uruguay, Argentina, Australia, Myanmar and Cambodia. Rice imports are much less concentrated. The six largest importers (Indonesia, Nigeria, Philippines, Iran, the European Union and Iraq) only represent 40% of the world import demand (Lançon and Mendez del Villar, 2008).

Among the main rice exporters, two groups can be identified. The first one includes Thailand, the United States and Pakistan. Their exports represent respectively 30%, 36% and 50% of their domestic output. **For these countries, the world market is therefore essential**, and it has been so since the 1960s. Vietnam, India and China, the second group, only export respectively 10%, 3% and 1% of their production. **For them, exports are residual.** Their rice exports started growing in the early 1990s, in the context of the opening of their economies to international trade and the expansion of their output, which led to exportable surpluses (Lançon and Mendez del Villar, 2008). Although they are not the focus of our study, the public policies of exporting countries, especially sizable production support, such as price support in Thailand and subsidies for water pumps for irrigation in India (Laiprakobsup, 2019), constitute a structural factor indirectly determining the imports of West African countries that must be taken into consideration. For these residual exporters, notably India, the West African market so far has been mainly a commercial outlet to dispose of their surpluses, often old stocks.

For all those rice exporters, exporting rice mainly serves to balance domestic supply and demand. **Their export volumes are highly variable from one year to another.** They do not just depend on international prices, but also on **domestic market conditions and national policies aiming above all to ensure adequate domestic supplies and stabilise prices in domestic markets.** The structure of the world market, which is highly concentrated on the supply side, while it is more competitive on the demand side, also creates volatility and uncertainty for importers.

A growing concern is that Asian countries are reaching their production potential while world demand keeps expanding. The emergence of new exporters, such as Cambodia and Myanmar, helps meet that demand. However, it is uncertain whether these countries will be able to equilibrate the market. To mitigate risks linked to their large dependence on imports, some importing countries with limited production capacity (Gulf countries, for example) are investing in rice projects in Asia and some African countries. **International trading operators are also seeking to reduce market risks and increase their margins by internalising the supply chain**, from farm production and milling in Asia to distribution in Africa (Lançon, Mendez del Villar, and David-Benz, 2013), as illustrated by Olam's strategy.³⁴

³⁴ Pers. comm. in Ghana, April 2019.

3.3. Intra-regional trade in locally produced rice

This section describes and analyses trade in rice produced in the focus countries, particularly along two cross-border trade routes where this activity is most significant. **Within West Africa, trade in staple food commodities takes place mainly within sub-regional zones or trade basins.** Those “geographic market structures” are due to a combination of natural, historical and cultural factors. Three main trade basins can be distinguished, where commodities flow between North and South (between coastal and Sahelian countries):

- **Eastern trading area**, comprising Nigeria, Benin, Niger and Chad (millet, sorghum, maize and cowpea);
- **Central trading area**, comprising Côte d’Ivoire, Ghana, Togo, Burkina Faso, Mali and eastern Mauritania (maize);
- **Western trading area**, comprising Senegal, western Mauritania, Guinea-Bissau, Guinea, Sierra Leone and Liberia (groundnut, palm oil, forest products).

However, there are also flows of agricultural and pastoral products between East and West, in the Sahelian zone (millet and sorghum in particular), and along the coast.

Intra-regional trading systems have been operating for centuries, largely based on production complementarities and commercial exchanges between the Sahara and the Sahelian zones and the more humid zones towards the Gulf of Guinea. That trade gave rise to large trading centres inland, and strong networks of merchants. As is well known, the colonial regime led to a major regional economic restructuring, promoting the exportation of raw materials to Europe and elsewhere, establishing artificial borders, and stimulating the emergence of major urban centres, which altered regional staple food trade. Currently, according to official data, intra-regional trade remains low, even for agri-food products, by international standards (Mitaritonna, Bensassi and Jarreau, 2017). Nonetheless, informal, unrecorded trade is known to be sizable, due to various causes, including misreporting, circumvention of customs, and the movement of goods and people outside official border crossings.

3.3.1. Informal cross-border trade data

The Permanent Interstate Committee for Drought Control in the Sahel (CILSS) has been collecting data on informal trade flows of staple food commodities across the borders of West African countries, including volumes and prices. These data are collected daily at several border crossings and reference markets in the vicinity of borders. For our study, daily data were aggregated to obtain monthly and annual figures.³⁵ The data series on informal cross-border trade produced by CILSS comprise most often parboiled rice and sometimes paddy and white milled rice.

3.3.2. Central trade basin: western Burkina Faso – eastern Mali

The first intra-regional trade route for rice we examine is within the central trade basin, between western Burkina Faso and southeastern/eastern Mali. Figure 11 represents the main production areas and cross-border trade flows in this basin. Locally produced rice is mainly exported from Burkina Faso to Mali.

The region of western and southwestern Burkina is one of the three main rice-producing areas in the country. In that region, production is concentrated around four irrigation schemes: the valley of Kou and Banzon area in the Hauts-Bassins; and Douna and Karfiguela areas in the Cascades region (FEWS NET, 2017).³⁶ Those four areas accounted for 26% of domestic rice output in 2011. In the same year, in the Boucle du Mouhoun region,³⁷ also in western Burkina, bordering Mali further north, the Sourou valley produced 17% of domestic rice output (BMGF, 2012).

³⁵ The total volume of truck shipments and the price per kilogramme of rice were recalculated with formula in order to double-check the processed data.

³⁶ In the Hauts-Bassins and the Cascades, rice represents the fourth most important crop in value (BMGF, 2012).

³⁷ The Mouhoun river is the Burkinabe name of the Black Volta.

In Mali, where per capita rice consumption is among the highest in the region, whereas it is much lower in Burkina Faso, **rice production is highly concentrated in the irrigated areas in and around the Inner Niger Delta**, which includes the Ségou and Mopti regions. This area produces 70% of domestic output. Rice cultivation is a major activity in the *cercles*³⁸ of Niono and Macina in the Ségou region, and of Mopti, Djenne, Tenenkou and Yovarou in the Mopti region. In contrast, most of the rest of the national territory has a deficit in rice production. In particular, the area stretching along the border with Burkina Faso (the *cercles* of Yorosso, Sikasso and Koutiala in Sikasso region, and the cercles of San, Tominian and Bla in Ségou region) has a large deficit in rice (LuxDev and Nitidae, 2018).

The spatial differential in production-consumption balance induces some trade flows of locally produced rice from western Burkina Faso's producing areas to Malian consumption centres. A quality differential may also play a role as it is well known that Malian consumers are more demanding than others in terms of rice quality, and as Burkinabe producers and processors may cater for that specific demand. Different sources of information provide evidence of those flows. Official data reported by FAO, which rely mainly on information provided by national customs and statistics offices, indicate the following volumes of imports in Mali from Burkina: 281 t in 2002, 1,300 t in 2003, 80 t in 2004, 25 t in 2006, and 3,779 t in 2012, the highest amount recorded over the period (the other years between 1980 and 2018 have either zero or missing values, with almost all years after 2012 having missing values). These figures are very small compared to imports from Thailand, India and other Asian exporters (ranging between 30,000 and 120,000 t over the period 2002 – 2012).

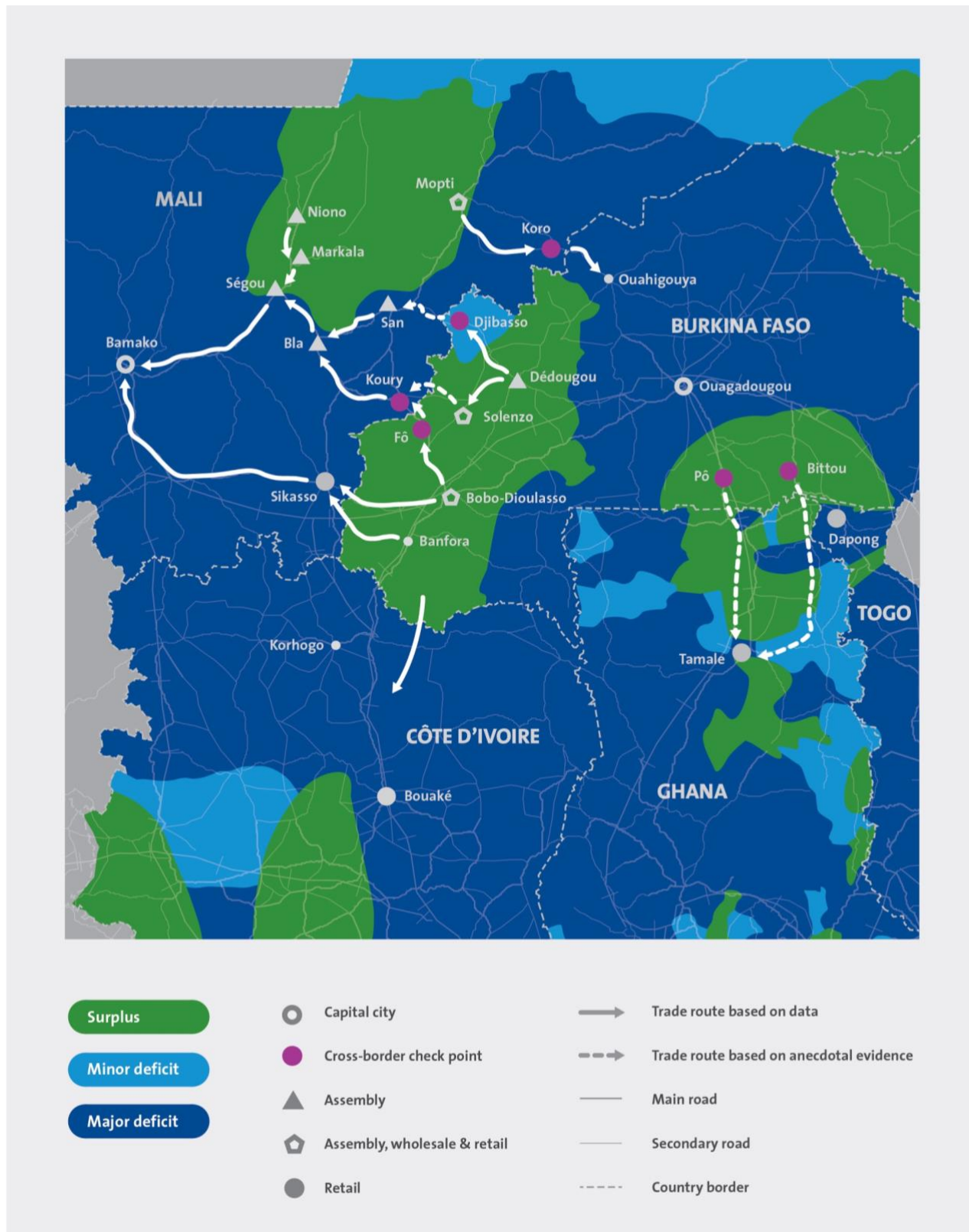
However, in this context, official data from customs offices reflect only part of the reality of intra-regional trade (FEWS NET, 2017; USAID, 2009; Luxdev and Nitidae, 2018). First, as we have seen, there are many missing values in the data series. In addition, while in principle these data measure flows of rice produced in Burkina, the possibility of transshipment of overseas rice, undeclared as such, cannot be excluded. The other main issue is that these data do not capture flows of locally produced rice passing through the border outside official crossings. As we mentioned earlier, informal cross-border trade is ubiquitous in West Africa, including for cereals. Therefore, these data must be interpreted cautiously.

Furthermore, in the FAO data, we also noted differences between rice exports from Burkina Faso to Mali and rice imports of Mali from Burkina Faso (while hypothetically they should be equal) in the yearly figures.³⁹ There are also relatively large discrepancies between FAO and ITC data (yearly figures). For instance, FAO reported 3,779 t of rice imports of Mali from Burkina Faso in 2012, while there was no rice imported that year according to the ITC database. Nevertheless, ITC monthly data seem more reliable, as exports from Burkina Faso to Mali match the imports of Mali from Burkina Faso. In particular, with the caveat that there are large missing periods in the series, we notice that trade flows from Burkina Faso to Mali occurred in September and October 2013 (around 565 and 415 t respectively), in April 2016 (690 t) and March 2018 (302 t), with an average of 490 t of rice traded.

³⁸ A *cercle* is the second-level administrative unit in Mali.

³⁹ Over the period 2001 – 2018, Burkina Faso exports to and imports from Mali accounted respectively for 2,784 t and 1,375 t, while Mali exports to and imports from Burkina were 371 and 1,697 t (FAOSTAT, 2019).

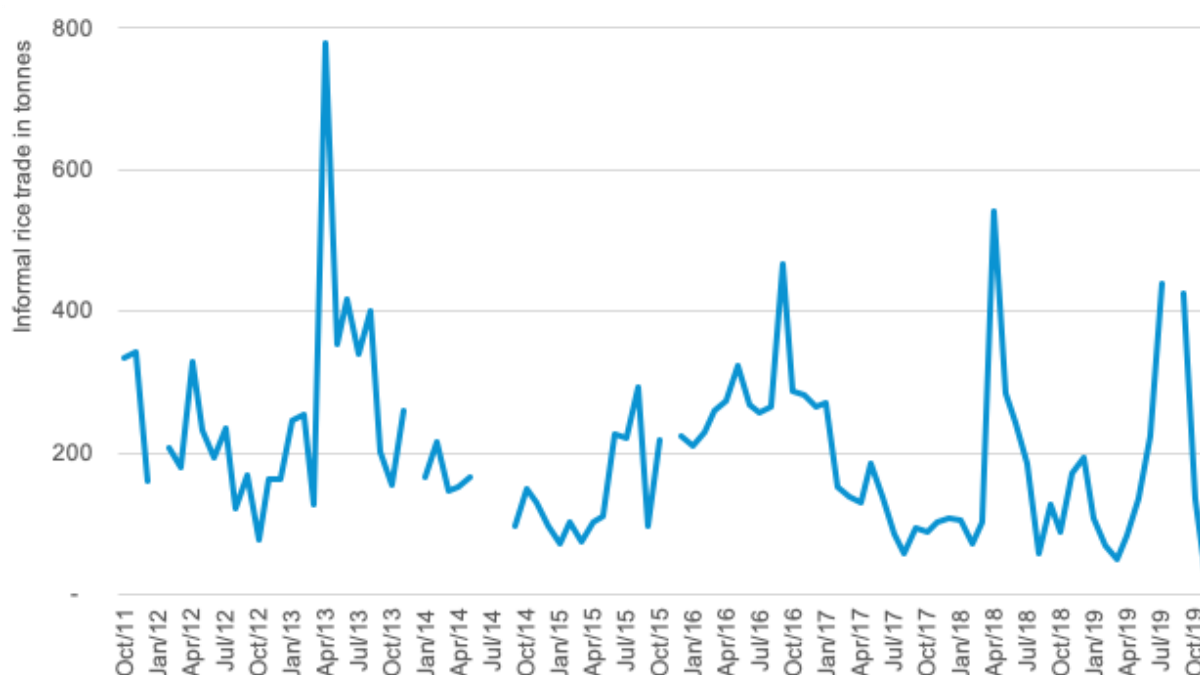
Figure 11. Rice production and cross-border trade flows in the central trade basin



Source: Adaptation from FEWS NET maps and authors' own research.

Another source we use for the analysis are the data on informal cross-border trade that have been collected by CILSS.⁴⁰ Since 2011, CILSS has collected daily data on informal trade of locally produced rice from Burkina Faso to Mali at two markets near the border on the Burkina side, in Bama and Banzon.⁴¹ To compare these data with other sources, we summed the daily volumes (in tonnes) across the two locations and we computed both monthly and yearly values of trade flows between October 2011 and November 2019. **According to these calculations, during the period 2012 – 2019 yearly volumes of informal trade averaged 2,115 t** (ranging between a minimum of 1,405 t, in 2014, and a maximum of 3,534 t, in 2013). **This is considerably higher than the ITC average for the same years (559 t).**

Figure 12. Informal trade flows of locally produced rice from Burkina Faso to Mali, 2011 – 2019



Source: CILSS (2019).

From the plot of monthly informal trade flows between Burkina and Mali (Figure 12), it is difficult to identify any clear ascending or descending trend over the period considered. Flows appear highly variable, hovering around 197 t, with multiple peaks (notably between April and September 2013, July and September 2016, April and June 2018, July and September 2019) and troughs (July – December 2012, July 2014 – March 2015, April 2017 – March 2018, September – November 2019).

Comparing these flows with the available official statistics listed above (ITC, monthly figures), we notice that rice informally exported accounted for 201 and 156 t (in September and October 2013), 273 t (in April 2016) and 103 t (in March 2018). Although we should be cautious in using these data, we note that the size of monthly informal flows relative to official flows is consistent with the empirical observation across several geographies and sectors whereby an estimation of informal trade evaluates its share at around 30% to 40% (Lesser and Moisé-Leeman, 2009). In the literature we found attempts to estimate rice trade flows between Burkina Faso and Mali. A study by the USAID Agribusiness and Trade Promotion project (Josserand, 2013) reported an average of 1,380 and 2,250 t of

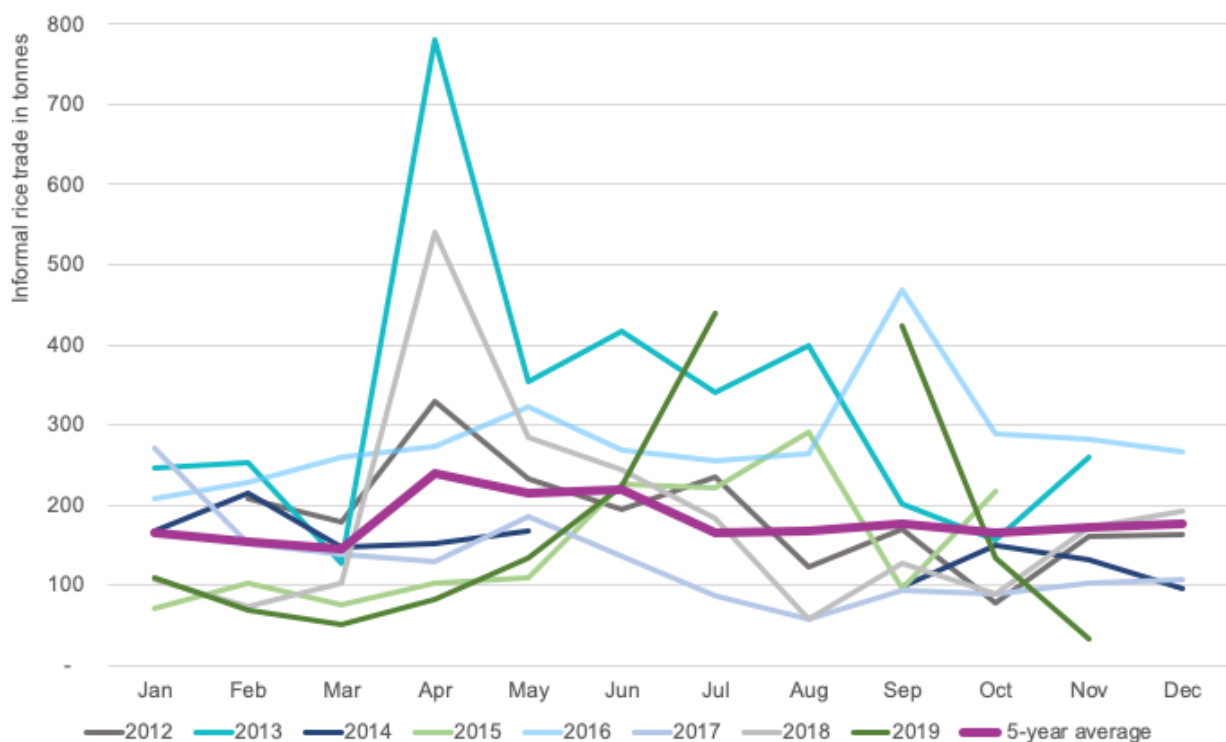
⁴⁰ The Regional Market Access Support Programme of CILSS.

⁴¹ The CILSS data reflect cross-border trading activity only to some extent, CILSS having selected major cross-border markets to monitor, but trade happens also at other points along the Burkina-Mali border.

parboiled rice being exported from Burkina to Ségou and Bamako, respectively, annually between 2010 and 2012. The study, however, claimed that these trade flows would represent only a small percentage (less than 10%) of the actual volume of cross-border trade flows in the same period. BMGF (2012) also pointed out the uncertainty associated with official trade data, suggesting that informal exports from Burkina Faso could be even higher, quoting unofficial estimates indicating that 20% of the paddy produced in Burkina Faso is exported informally.

Examining further the CILSS data, **we can observe modest seasonal variations in trade flows from Burkina to Mali, with higher volumes crossing the border between April and August** (Figure 13). In western Burkina, rice is harvested twice a year, between October and December, following the rainy season, for the main season, and between June and July for the off-season (FEWS NET, 2017). The seasonal rhythm of production is similar in Mali, where the main harvest period runs from November to February, while the off-season crops are harvested around June/July (Diakité and Bagayoko, 2014; LuxDev and Nitidae, 2018). **The observed seasonal increase in rice trade is consistent with the crop cycle:** following the main harvest, rice is marketed or stored locally; as the lean season approaches and market demand rises, rice is moved to high-demand areas, including across the border into Mali. After the off-season harvest, cross-border trade rises again, albeit at a lesser rate.

Figure 13. Seasonal trends in informal trade flows from Burkina Faso to Mali, 2012 – 2019 (2014 – 2018 five-year average)



Source: CILSS (2019).

Different sources of information⁴² indicate that informal cross-border trade also happens in the other direction, from Mali to Burkina Faso, in some circumstances. Unfortunately, there are no statistical data available on that trade. Flows from the Ségou region to Burkina are reported in a recent report (LuxDev and Nitidae, 2018): they are, however, very occasional according to traders interviewed in the study. Nyeta Conseils (2019) also suggests that Malian rice flows to Burkina Faso are relatively small. According to a local operator, only small quantities are transferred from the city of Koro. For instance, a grain operator involved in the transactions estimates to process an

⁴² Including personal communications with country actors.

average of 150 t/yr of rice. In general, locally produced rice is first consumed within the region of production (Mopti Rice Office) before exporting surpluses.

However, official data from FAO and ITC for 2010, 2011 and 2012 indicate some trade from Mali to Burkina, with the two sources providing the same figures and, for ITC, monthly Malian exports matching monthly Burkinabe imports. For these years, average monthly exports from Mali to Burkina amount to 80 t of rice.

Informal trade of rice from Burkina to Mali seems to take three main routes, as suggested by different sources regarding rice production and trade as well as the local infrastructure (see Figure 11; FEWS NET, 2009; BMGF, 2012; FEWS NET, 2017; LuxDev and Nitidae, 2018). Each route includes different types of markets and exchange points where operations such as collection, consolidation, storage, transport and retail are carried out.

Rice produced in the valley of Kou and Banzon (in the Hauts-Bassins) and the Douna and Karfiguela perimeters (in the Cascades region) flows towards the main markets located in bordering (deficit) areas in the Sikasso region, such as Koury (a rural commune in Yorosso *cercle*) and Sikasso (a secondary consumption centre). A part of these flows is likely to be then shipped, through different routes, to main trading/urban centres such as Ségou (a main cereal trading centre) and Bamako. Data deriving from CILSS monitoring in the Bama and Banzon border markets in Burkina capture these trade flows. It should be noted that this trade happens despite the fact that producing areas in Western Burkina Faso are close to Bobo Dioulasso, an important urban centre and rice market (wholesale and retail), and to Banfora (a major wholesale/retail market in the Cascades region supplying Bobo and Ouaga; BMGF, 2012; CILSS, FAO, FEWS NET, WFP and ACF, 2012).

Rice produced in the Sourou valley in the Boucle de Mouhoun flows to border markets in the Ségou region in Mali. Informal trade in this area is reported by BMGF (2012) and FEWS NET (2017), but data on these trade flows are not available. Difficult access to markets in Bobo Dioulasso and Ouagadougou (due to poor quality roads) is stated as the main factor driving exports to Mali. Flows are likely to go through Dédougou (a major collection and consolidation centre), then flowing either to Djibasso (on the border) or to Solenzo (an important wholesale and retail market) in Burkina. From there the rice is probably shipped to several Malian markets such as San (an important assembly market for rice, on the main road to Bamako), possibly flowing to Bla (another important assembly market) and Ségou.⁴³

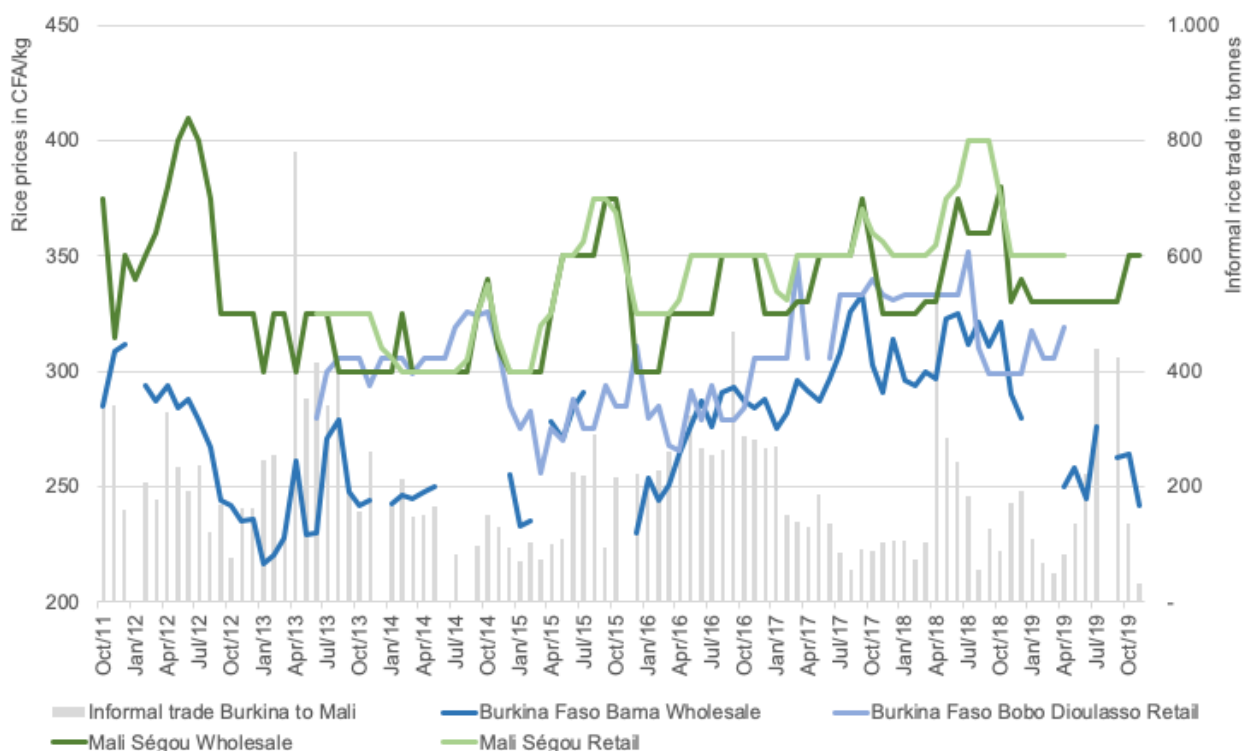
It should be noted that a large part of the operators in the *Office du Niger* are Burkinabe as, historically, a large part of the labour force used during the construction of the Markala Dam consisted of workers from Burkina Faso. This may partly explain the links between the two zones. In addition, Malian rice being more expensive compared to rice produced in Burkina, the exchanges are more intense in the direction of Burkina-Mali.

Figure 14 shows prices of locally produced rice in selected markets in the Western Burkina-Eastern Mali trade basin, including the wholesale (in Bama) and retail (in Bobo Dioulasso) origin markets in Burkina Faso, and the wholesale and retail (in Ségou) destination markets in Mali.⁴⁴ Monthly informal trade flows from Burkina to Mali are plotted against the price data to perform an analysis of the price and trade dynamics in this basin.

⁴³ A recent study (LuxDev and Nitidae, 2018) developed an interactive map showing the main flows of rice in the Ségou region and the Yorosso *cercle* (in Sikasso region). The study does not look at cross-border trade dynamics, but the map produced provides an updated review of the main markets for rice and the main trade routes in this area. In addition to those mentioned above other important collection markets are found north of Ségou in Konodimini, Farako, Manzara, Souba, and Tamani. It is not possible at this stage to assess whether Burkinabe rice flows also in these markets.

⁴⁴ To compare prices between Burkina Faso and Mali for traded rice, we selected wholesale prices. The wholesale price in Burkina will be the one paid by foreign traders for rice later sold in Mali, and the wholesale price in Mali will be the price paid by Malian wholesalers for rice later sold to retailers. Comparing wholesale prices therefore allows us to better target cross-border traded rice flows.

Figure 14. Locally produced rice prices and informal trade flows in the western Burkina Faso-eastern Mali basin, 2011 – 2019



Sources: wholesale price data: GIEWS, except Wholesale Bama: CILSS; retail price data: FEWS NET. Informal trade data: CILSS. Milled rice, except Bama (parboiled).

The pricing of rice in this trade basin shows three main patterns. Firstly, we notice a high variability of rice prices in the national market in Burkina, where the price gap between the rice sold in markets in the production area (Bama) and consumption markets (in Bobo Dioulasso) fluctuates considerably throughout the period, being particularly large between 2013 and 2015. The differential is even negative at certain points in time (e.g. June – August 2015; July 2016; October 2018). This suggests the existence of inefficiencies in the domestic rice marketing system, such as difficult physical access for rural producers to the main consumption markets, e.g. due to quality issues (low quality, lack of visibility, absence of a quality label) or other barriers (such as inadequate storage facilities) and a lack of competition among commercial actors distributing locally produced rice (wholesalers and retailers).⁴⁵

Nonetheless, starting from April 2016, this differential narrows significantly and the wholesale price aligns more closely with the retail price, although still displaying a fairly high degree of volatility in subsequent years. This could result from improvements made in recent years in the Burkinabe rice marketing system due to several government and development partner initiatives. It might also reflect more intense competition among rice buyers in this region of the country, as suggested by the spikes in informal trade from Burkina to Mali during 2016 and 2018.

Secondly, the marketing margin between the wholesale price and the retail price in Mali is smaller and remains relatively stable over time. Both wholesale and retail prices fluctuate moderately, with higher prices during the

⁴⁵ Commercial players in Burkina are relatively small and dispersed, and we note the absence of a system of contractualisation between the various direct actors of the sector and between these same actors and the state (BMGF, 2012; CIR-B and VECO-WA, 2015).

rainy season, and lower prices after harvests, especially between December and March, and they do so in a more similar fashion.

This low variability is a factor of security for the producers and the other actors in the value chain (traders, processors and consumers), for whom the commercial risks are relatively limited compared to other agricultural commodities (LuxDev and Nitidae, 2018). **It also implies that rice marketing in Mali performs better than in Burkina Faso and the connection between rural and urban areas is stronger.** This is confirmed by a recent study (LuxDev and Nitidae, 2018) that analysed rice production and marketing dynamics in the Ségou and Sikasso regions in Mali. The study concludes that the number of market operators is large enough to maintain intense competition among Malian wholesalers and semi-wholesalers constraining them to maintain limited profit margins and forcing them to minimize their logistical costs and optimize their operations. In addition, improvements in the internal road network in recent years has reduced the cost of getting local rice to markets. Consumer preference for local rice (compared to imported rice) is another contributing factor.

Thirdly, as for cross-border price relationships, significant and persistent price differentials are observed between markets in the production areas in Burkina (Bama) and destination markets in Mali (Ségou), with both wholesale and retail prices in Mali being consistently higher than those in Burkina. This observation is consistent with the geography of rice production and consumption in this trade basin that was described above. **Those wide price differentials provide strong incentives for trading rice from Burkina to Mali,** as shown by the CILSS data. The price gap was wider in 2012 – 2013 and at the beginning of 2016, periods corresponding to intense trading activity. However, the gap has decreased in recent years as prices on the Burkina side (Bama) increased. This suggests a possible improvement in the efficiency of cross-border marketing channels (perhaps a better transportation system) or increased demand for Burkinabe rice, possibly stemming from an increased milling activity in northern Ghana (see section 3.3.3).

Besides the geography of rice production and the transport infrastructure, consumer preferences and the organisation of markets seem to play an important role in rice trade between Burkina Faso and Mali. In the cross-border marketing channel, Malian traders are predominant. They often procure rice directly in the producing areas of Western Burkina Faso (the Banzon and Bama plain areas in the Hauts Bassins region and the Sourou plain area in the Boucle du Mouhoun). They purchase both paddy and parboiled rice, which they then ship in bulk to border markets (FEWS NET, 2017).

The development of the Burkina-Mali marketing channels is probably linked to the multiplication of mini-rice mills and the improvement of small hullers, as well as the instalment of large rice mills such as the *Grand Distributeur Céréalière au Mali* (GDCM) in Ségou, which have generated productivity gains and quality enhancements and allowed Malian processors to grab a larger share of the urban middle- and upper-class markets. **At the same time, the promotion of the Gambiaka rice variety, specific to Mali, has raised awareness and interest in local rice among those consumer classes, which were usually more inclined to consume imported rice** (LuxDev and Nitidae, 2018).⁴⁶ According to the LuxDev and Nitidae (2018) study,⁴⁷ since 2015 consumers have increasingly preferred local rice over imported rice, especially in major consumption centres such as Bamako. This is reflected by the structurally higher level of local rice prices (in Ségou and Bamako), which is somewhat supported by our price analysis above. According to FEWS NET (2017), rice trade from Burkina to Mali could also be due to the existence of a niche market

⁴⁶ It also has had positive spillover effects on other local rice varieties.

⁴⁷ According to this study, at the Ségou region scale, more than 75% of production goes to Bamako (mainly irrigated rice, while lowland rice represents a very negligible part of the total amount of rice marketed to the capital city). About 20% is consumed within the region and the remaining 5% is divided between Timbuktu, Gao (including boats on the Niger River) and more occasionally Sikasso or Burkina Faso.

in Malian urban centres for rice varieties and parboiled rice grown and processed in Burkina by small-scale and semi-industrial operations, which would have distinctive organoleptic qualities.

The dynamism and increasing sophistication of Malian rice marketing channels contrast with the state of development of the value chain in Burkina. The Burkinabe rice trading sector is not as well organised as in Mali, either through informal networks or formal professional organisations. Commercial players in Burkina are relatively small and dispersed and producers sell their marketable production to a few rare traders, especially to women, in small quantities, having to deal with a variability of marketing systems from one rice-cultivation plain to another. This, coupled with the variability of rice prices in the domestic market, undermines the structuration of cereal markets, including for rice (regulations and standards, professional training, and so forth) and the financing of operations and capital investments (Fall, 2016; BMGF, 2012). That comes in addition to other constraints, including the already mentioned lack of infrastructure and poor access, for western Burkinabe producers, to major consumption centres, as well as insecurity on roads in rural areas (CILSS, FAO, FEWS NET, WFP and ACF, 2012). About 55% of domestic rice processing capacity is located in Western Burkina but it is fragmented amongst many small processing units. Most paddy production is purchased and processed by organised groups of small-scale parboilers, while there are few industrial and semi-industrial rice processing plants (which are mostly located around Bobo-Dioulasso). Storage capacity amongst processors and traders is markedly low in Burkina (FEWS NET, 2017). Also, the consumption of locally produced rice in Burkina is limited by several factors, including the low availability and the high price, as well as impurities, cooking swelling and cooking difficulty (Fall, 2016). **The erratic and often wide marketing margins observed in the case of Western Burkina Faso in our price analysis thus reflect the lesser advancement and efficiency of the Burkinabe marketing system compared to that of Mali.**

It is worth noting that other trade flows exist between Mali and its neighbours.⁴⁸ For instance, on the eastern border, traders from Mauritania source rice from the Dogofry market in the *Office du Niger* zone. These exports are mostly done informally and carried out between January and April to take advantage of the low prices applied during this period. Beyond 300,000 CFA/t of milled rice, Mauritaniens stop purchasing. Before the security crisis, local rice outflows could reach an average of 100 t per week for four months. This makes a total of about 1,600 t per year. With the deterioration of the security situation, however, the weekly volume of transactions fell to around 20 t during the mentioned period (Nyeta Conseils, 2019). On the Mali-Guinea axis, operators of the interprofessional cereals committee of Guinea go to Mali to buy parboiled and husked rice. Parboiled rice is in high demand in Guinea, particularly in Kankan and along the route to Conakry. About twenty Guinean grain operators go to Mali and purchase large quantities from commercial intermediaries based in Bamako. Similarly, some Malian traders carry rice to Guinea in partnership with Guinean operators. The volume of annual transactions may reach more than 5,000 t. However, obtaining reliable data is challenging as operators on both sides of the border hide their transactions to avoid pressure from authorities (Nyeta Conseils, 2019). Finally, until 2007 there were significant import flows in Mali coming from Senegal (6,019 t/yr) and Côte d'Ivoire (4,663 t/yr). From 2008 onwards, transactions from these two countries have been anecdotal, with the notable exception of 2012, when imports from Senegal and Côte d'Ivoire exceeded 20,000 t (Nyeta Conseils, 2019).

3.3.3. Central trade basin: southern Burkina Faso – northern Ghana

In the central trade basin, another relevant cross-border trade route to explore is between Burkina Faso and Ghana. Its geography of production and trade is also represented in Figure 11 (in section 3.3.2). Many observers in both countries report the existence of informal cross-border trade flows from southern Burkina to northern Ghana. In this case, it is mostly paddy that is exported. Some quantities of rice processed in Ghana (milled or parboiled) are exported back to Burkina.

⁴⁸ These trade flows were not represented in the map in Figure 11, as they are outside the scope of this study.

The Bagré plain area in the Centre-East region of Burkina Faso is a major irrigated area in the country accounting for 23% of rice output in 2011.⁴⁹ Rice yields are relatively high in this area and rice is the fifth most important crop (and the first cash crop). The area benefits from good transport links to the large consumption market in Ouagadougou (BMGF, 2012). Bagré is frequented by Ghanaian traders who source paddy rice.⁵⁰

In northern Ghana, the demand for local rice, especially in the parboiled form, is strong. Traditionally, a large part of paddy supplies is parboiled to preserve the integrity of grains during the milling process, given that the equipment performs poorly. Although parboiled rice is seen as an inferior product compared to white aromatic rice by many consumers, and preferences are shifting towards the latter, there is a large market segment for the former type of rice.

The derived demand for paddy has increased in northern Ghana after 2008 following the growth in the local milling industry. Five large milling operations are established in this part of the country, with different levels of capacity and performance. Those investments have contributed to improving the paddy-milled rice conversion rates and product quality in Ghana. All of them have attempted to vertically integrate paddy production, although with mixed results. For instance, Avnash Industries Ltd., which owns a large mill in the Tamale region, has had difficulties in sourcing adequate paddy supplies to maintain adequate throughput volumes and ensure its economic viability.

Furthermore, only a minor fraction (roughly 20%) of locally produced paddy and processed rice is marketed outside producing areas. The majority of the rice produced in the Northern and Upper East regions is consumed locally, with little of this rice reaching markets in Kumasi and even less in Accra. In urban markets in Kumasi, the rice produced in the nearby region of Ashanti competes more effectively with imports than domestically produced rice does in markets further south, although the volumes remain relatively small. That is due to transport costs and preferences for locally produced rice.⁵¹ Rice from the Volta region is available in stores in Accra, but the market is dominated by imported rice.

These multiple market factors plausibly generate strong incentives for trading paddy or parboiled rice from southern Burkina Faso to Ghana. Unfortunately, CILSS has not collected data on informal cross-border trade between these two countries. Presumably, these trade flows would go through the border towns of Pô and Bittou in southern Burkina, where other agri-food products are traded.

Relative prices between Burkina and Ghana corroborate reports of informal exports from the former to the latter (see Figure 15). Although historical prices for local rice in the Bagré area and northern Ghana were not readily available, prices in Bobo-Dioulasso and Accra show a wide differential. This suggests that there are arbitrage opportunities between southern Burkina and Ghana.

⁴⁹ Bagré is an irrigation scheme that has existed since the construction of the dam in the 1980s. In the spring of 2012 the Bagré Growth Pole project was launched with 133 million US dollars from the World Bank. The Growth Pole aims to accelerate growth of land development and wants to attract private investors. However, so far, Bagré Pole has attracted few investors in production, processing and input supply (pers. comm. with Bagré Growth Pole officials, April 2019; BMGF, 2012).

⁵⁰ FEWS NET (2017) and pers. comm. with Bagré Growth Pole officials (April 2019).

⁵¹ Pers. comm. with value chain actors in Ghana, April 2019.

Figure 15. Comparison between imported and local rice prices in the southern Burkina Faso-northern Ghana basin, 2006 – 2019



Sources: GIEWS (2019) for Ghanaian prices and CILSS (2019) for prices in Burkina Faso.

The expansion of rice production in Ghana has brought about an increase in the demand for rice seeds. Informants in Burkina Faso and Ghana reported that rice seeds produced in the former are exported to the latter. Rice seeds from Burkina are also exported to Côte d'Ivoire.⁵² The Burkinabe company NAFASO is the main supplier.⁵³ Although in Ghana and other countries in the region most of the rice seeds utilized are still not certified, the regional demand for improved seeds is rising. The regional supply, however, remains very low (in Ghana, there is essentially no commercial producer of certified seeds).

3.3.4. Production and marketing costs in the central trade basin

A marketing cost analysis is useful to understand the determinants of the performance and structure of the rice value chains in the central trade basin, and the possible obstacles to policy reforms.

The following Table 7 presents costs and margins of production, processing and marketing of locally produced rice in Mali, Burkina Faso and Ghana. Given that data comparing these three countries were not available, we collected and gathered information from different sources, sometimes finding high discrepancies between them.⁵⁴ Also, unfortunately, the data gathered are not always referring to the same years. Therefore, the figures should be

⁵² Trade data from ITC indicate that Burkina Faso exported rice to Côte d'Ivoire between 2007 and 2017 (with a maximum of 900 t in 2015, and an annual average of 326 t), but do not specify whether those exports are seeds or rice for food consumption.

⁵³ NAFASO is based 100 km outside of Bobo Dioulasso in Burkina Faso. He is a producer of seeds since 1993, and in 2007 – 2008 has started working with seed out growers (BMGF, 2012).

⁵⁴ For example, Fall (2016) presented paddy production costs at 81 CFA/kg and producer's margin at 145 CFA/kg for milled rice cultivated by gravity-fed irrigation, while Mees (2016) indicated respectively 129 CFA/kg and 21 CFA/kg.

considered as estimations, rather than exact values, and one should look at the orders of magnitude to compare the situation between the three countries.

Table 7. Production and marketing costs in Mali, Burkina Faso and Ghana

	Burkina Faso		Mali		Ghana	
	CFA/kg paddy	CFA/kg parboiled rice*	CFA/kg paddy	CFA/kg parboiled rice*	CFA/kg paddy	CFA/kg parboiled rice**
Paddy production cost	97	149	108	166	133	240
Producer net margin	43	66	42	65	16	30
Paddy selling price	140	215	150	231	150	270
Parboiling cost	10	15	25	38		46
Milling cost		5		7		
Storage cost		2		7		2
Transport cost		2		3		2
Processor net margin		18		25		10
Parboiled rice selling price		260		310		330
Transport cost to chief town		5		7		5
Trader net margin		22		12		15
Parboiled rice selling price (retail)		290		330		350
Transport cost Bobo Dioulasso to Koutiala		7				
Transport cost Pô to Tamale		10				

Sources: Authors' elaboration based on research. Data for Mali: Fall (2016, but data from 2014) and LuxDev and Nitidae (2018) for paddy production costs, price and producer margin, LuxDev and Nitidae (2018) for processing costs and margin, GIEWS (Ségou, 2014) and FEWS NET (Koury, 2014) for prices. Data for Burkina Faso: UNPR-B and VECO-WA (2014) for paddy production costs, price and producer margin, Fall (2016), UNPR-B and VECO-WA (2014) and Zongo (2018) for processing costs and margin, CILSS (Bama, 2014) and FEWS NET (Bobo Dioulasso, 2014) for prices, Afrique Verte (2009) for transport cost to Mali, and WFP (2012) for transport cost to Ghana. Data for Ghana: Ragasa et al. (2014) and Byerlee et al. (2013) for production and processing costs (but data actually from 2011 for both studies), Noma (2012) for storage and transport costs, GIEWS (Bolgatanga, 2011) for prices.

*Milling yield in Mali and Burkina Faso: 65%.

** Milling yield in Ghana: 55%.

It appears that paddy production costs are the biggest cost item and that farmers get a decent margin, except for Ghana.⁵⁵ Transport costs for small distances are not outrageous. Milling yield, i.e. the percentage of milled rice obtained from one unit of paddy, is the same in Burkina Faso and Mali (65%) but is surprisingly lower in Ghana (55%). Therefore, while processing costs and trader margin in Ghana are not the highest in this comparison, the necessity to buy more paddy to obtain the same amount of milled rice increases the overall cost.

Looking across countries, **Burkina has the smallest costs for both paddy production and processing.** Mali has the highest costs. All of that seems to confirm what we see in the trade flows: Burkina exports locally produced rice to Mali and Ghana, from its production areas close respectively to the borders of each country. **Also, traders' margin**

⁵⁵ It should be noted that, as we want to study flows between Burkina Faso and Ghana, we have selected data from the Northern region of Ghana (non-aromatic and irrigated rice), where farmer's margin is very small (6% of paddy selling price), while in the Volta region for example (aromatic and rainfed rice) farmers get a much higher margin (53%).

is highest in Burkina. This is not surprising, as we observed that the marketing chain is not so well developed in this country, and where perhaps a few large wholesalers dominate the market and can set big margins.

3.3.5. Eastern trade basin: northeastern Benin – northwestern Nigeria

In the eastern trade basin, we examine cross-border trading between northeastern Benin and northwestern Nigeria. Whereas section 3.2.3 provided a detailed account of re-exportation flows of overseas rice between the two countries, **this section focuses on trade in locally produced rice, which is mainly exported from Benin to Nigeria.**

In Benin, rice production is highly concentrated in a few parts of the country. **The largest rice-producing area is in the north, in the departments of Alibori (54% of domestic rice output), which borders Nigeria, and Atakora (20%),** bordering Togo and Burkina. Rice is also produced in the central part of the country, in the departments of Collines (8%), Borgou (7%), Donga (6%) and Zou (3%; MAEP, 2010). The contribution to domestic production of the southern departments (Couffo, Mono, Atlanique, Ouémé and Plateau) is minor, despite a large potential in the lowlands and an old tradition of rice cultivation (Afouda, 2013). **Rice production accelerated in the years following the 2008 crisis, due to an expansion of the cultivated area and an increase in yields** (improvements in irrigation, adoption of improved seeds, and increased use of fertiliser). The highest rates of yield growth were seen in the regions of Malanville, in the north, and Glazoué, in the centre (FFI and GAIN, 2016a).

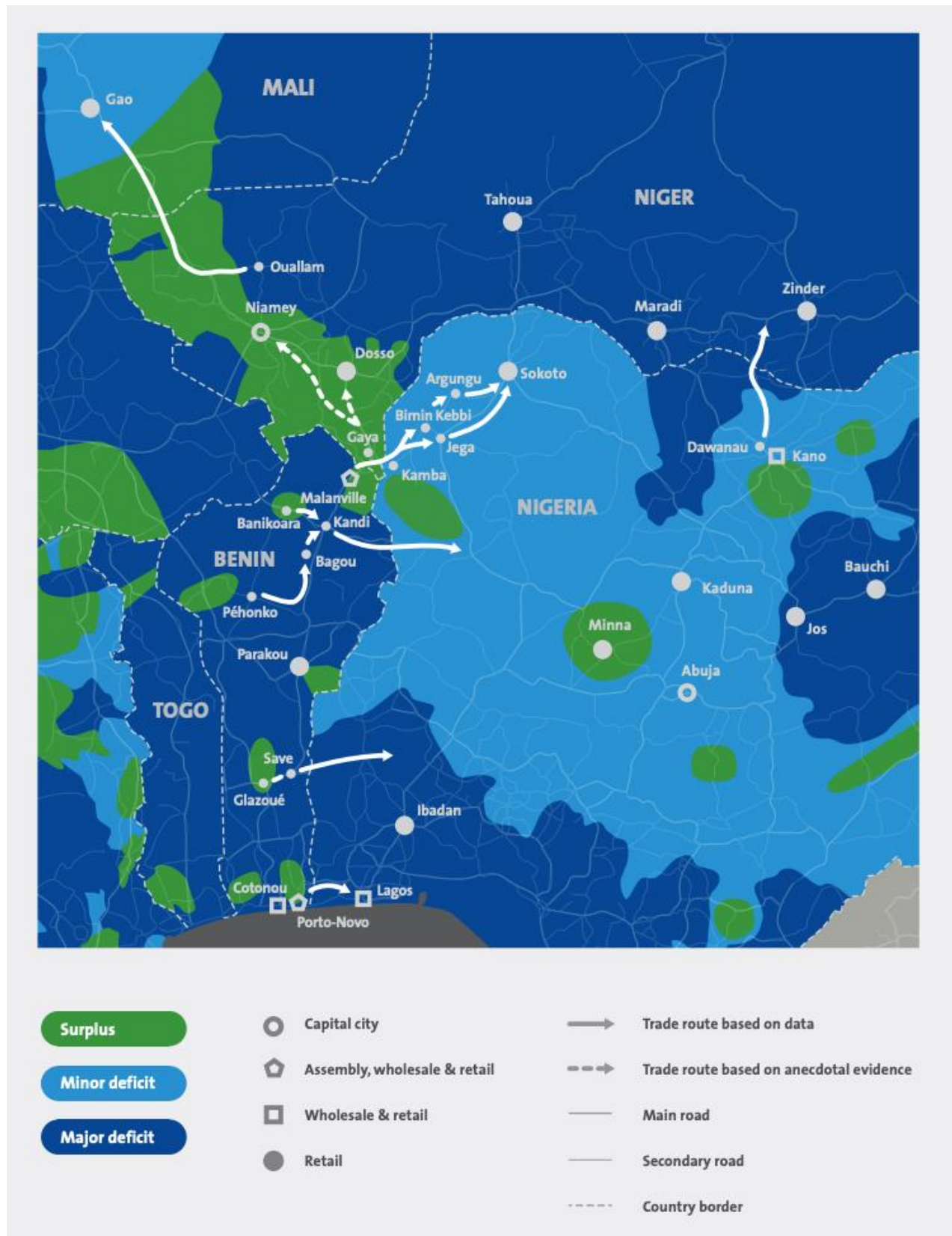
In Nigeria, which is the biggest rice consumer in the region, rice is grown in almost all the states in rainfed or irrigated systems (Ayinde *et al.*, 2016). The main rice-growing areas are in the North Central zone (47%), followed by the zones of the North West (29%), the North East (14%), the South East (9%), and the South West (4%). In particular, Kaduna state has the largest producing area (22% of domestic output), followed by Niger state (16%), Benue state (10%) and Taraba state (7%). **Yet, the extent of the major rice-producing areas in Nigeria is limited and most of its national territory has a deficit in rice** (Ezedinma, 2008). Rice consumption increased rapidly in Nigeria over the past decade (see Table 3). Since the 2008 crisis, several investment projects in the rice milling industry have mainly taken place in the northcentral and northwestern parts of the country, where consumers have a preference for white rice. That has created a strong demand for paddy. Whereas in northeastern Benin consumers have a preference for parboiled rice, which is amply available on rural markets at affordable prices. **The proximity of the major rice-producing areas in Benin to the eastern border and major industrial and consumer markets in Nigeria has given rise to sizable and consistent trade flows of locally produced rice from Benin to Nigeria.**

Figure 16 maps the main trade routes in this basin. **Cross-border trade flows mostly originate from the north of Benin,** in the basins of the Niger River and its tributary, the Mékrou River, where the largest hydro-agricultural structures in the country have been developed. Rice produced in the irrigated schemes around Malanville and Banikoara, in Alibori department, is informally exported to Nigeria as paddy, given that husking is less expensive there. **Rice is transported by road to the consumption centres of Sokoto, Jega, Birnin Kebbi and Agungu, via Gaya and Kamba, or by canoes on the Niger river** (OECD SWAC, 2019). The second cross-border marketing channel takes rice produced around Péhonko, in Atakora department, to Nigeria most likely via the markets of Bagou and Kandi on the Beninese side. Thirdly, rice produced around Glazoué flows through Save, crosses the border, and is then hauled to several consumption markets in Nigeria in southwestern Nigeria (FEWS NET, 2009; CILSS data, 2019).

The bottlenecks faced by many rice initiatives to develop the local production in Nigeria largely contributed to the development of this cross-border trade dynamic. Several types of actors organise, in synergy and complementarity, these cross-border trade flows. These include traders, carriers, and forex dealers. **Large traders, in particular, are the essential link in economic exchanges between Benin and Nigeria and ensure the collection and delivery of locally produced rice from production sites to consumption centres.** Those traders wield significant market power. Various categories of traders can be identified, which often differ from those involved in the re-exportation of imported rice from Benin to Nigeria. For locally produced rice, we distinguish collectors, wholesalers and retailers.⁵⁶

⁵⁶ Based on field interviews conducted by LARES in June – July 2019.

Figure 16. Rice production and cross-border trade flows in the eastern trade basin



Sources: Adaptation from FEWS NET maps and authors' own research.

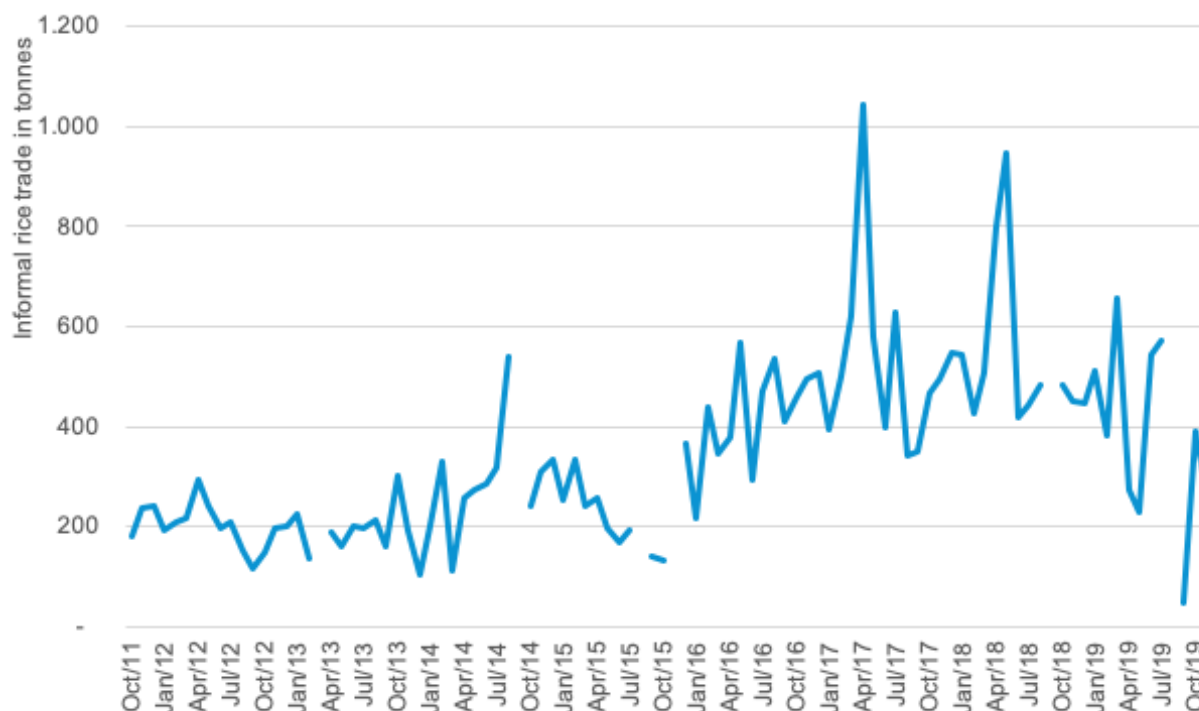
Several data sources provide evidence of these trade flows. Official data from FAOSTAT indicate the following export volumes from Benin to Nigeria: 18 t in 2001; 1,000 t in 2007; 27,254 t in 2008; 139,387 t in 2009; 552,378 t in 2010 (the highest volume recorded); 23,223 t in 2012; 78,267 t in 2013; and 18,291 t in 2014. All the other years between 1980 and 2007, in 2011, and after 2014 have either zero or missing values. Beninese export data from ITC paint a similar picture (except in the year 2011, in which the ITC data indicate that Benin exported 60,110 t to Nigeria whereas FAOSTAT has a missing value). The monthly trade data provided by ITC indicate that monthly exports from Benin to Nigeria amounted to about 14,600 t, on average, in the period 2010 – 2014, with a maximum of 160,000 t in August 2010 and a minimum of 200 t in January 2012. Oddly, both FAOSTAT and ITC data on Nigerian imports do not record any volumes of rice coming from Benin. **The pattern of these official data suggests that they essentially capture rice re-exportation flows through Benin and to Nigeria** (for instance, see the surge in total Nigerian imports in 2010 in Figure 5), although partially, given the previously mentioned transshipment volumes.

We could not find evidence of possible informal cross-border trade happening at other border crossings⁵⁷ and in the opposite direction. Nonetheless, official data from FAO and ITC for 2007, 2009, 2010 and 2014 report some trade flows from Nigeria to Benin, with the two sources providing the same figures (ranging between 2 and 665 t) and, for ITC, also in the years 2011 (50 t) and 2017 (the highest figure, i.e. 2,411 t). That could be locally produced rice exported to Benin. Data on Nigerian exports are missing in both databases.

We now turn to the data on informal cross-border trade collected by CILSS. Concerning the Benin-Nigeria trade route, since 2011 CILSS has collected daily data on informal trade of locally produced rice from Benin to Nigeria at several border markets on the Beninese side, including in Bagou, Bante, Dassa, Glazoué, Gogounou, Malanville, Ouesse, Péhonko, Savalou and Save. As in the case of the central trade basin, we summed trade volumes across border markets and calculated monthly and yearly figures between October 2011 and November 2019. Over the period 2012 – 2019, yearly volumes of informal trade averaged 3,908 t, ranging between a minimum of 2,080 t in 2013 to a maximum of 6,360 t, in 2017 (that is considerably lower than the average trade volume from the ITC data for the same years, 19,963 t). That said, real trade flows of locally produced rice might be much larger, given that CILSS monitored only selected border markets.

⁵⁷ The ECENE survey (*Enquête sur le commerce extérieur non-enregistré*) conducted by the National Institute of Statistics of Benin (INSAE) in 2011 indicates that there are 171 identified border crossing points and they are all distinct from official border points (Mitaritonna *et al.*, 2017).

Figure 17. Informal trade flows of locally produced rice from Benin to Nigeria, 2011 – 2019



Source: CILSS (2019).⁵⁸

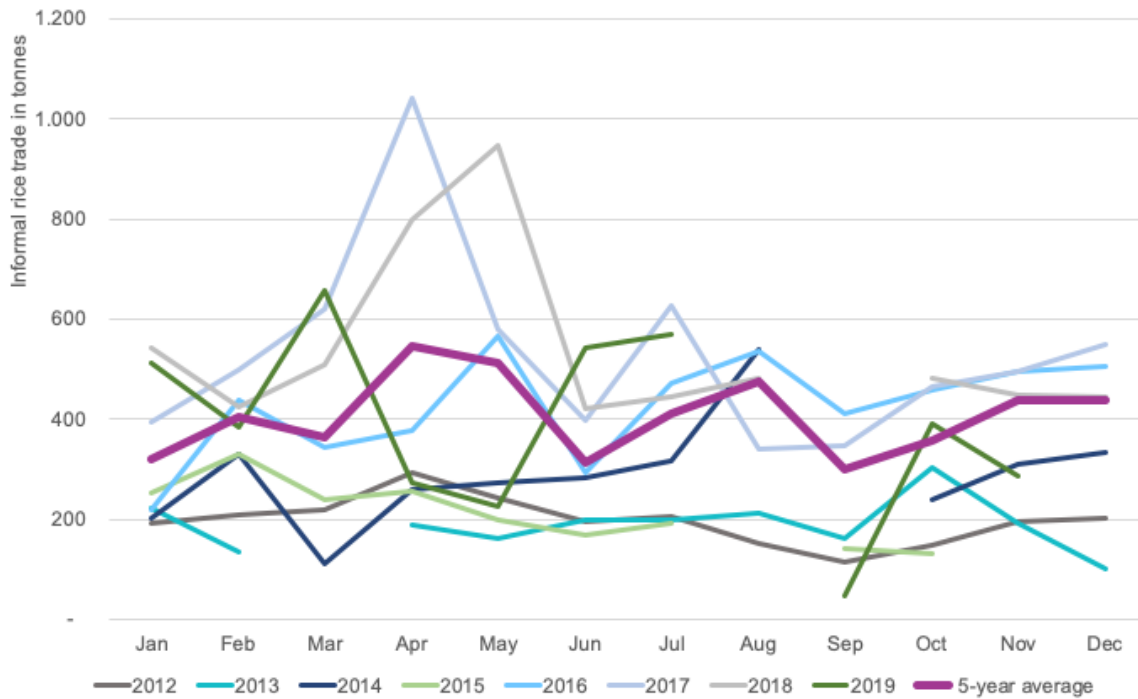
Figure 17 shows that monthly informal trade flows from Benin to Nigeria grew significantly between the early and late 2010s. Starting from 182 t in 2011, they rose in 2016 – 2017 and reached peaks at 1,042 t in April 2017 and 948 t in May 2018. The Nigerian border closure in August 2019 resulted in a sudden drop in trade volumes between July and September 2019. However, informal trade resumed in October (391 t).

We observe seasonal variations in those trade flows (Figure 18), which correspond to the crop cycle in the two countries. The main harvest period in Nigeria begins in September and ends in December-January. In the North of the country, there is also an off-season harvest between April and June. In Benin, the main harvest season takes place between August and September, for rainfed rice, and November – December, for irrigated crops. There is also an off-season harvest between June and July. Informal cross-border trade flows usually occur in April and August, just before the harvest periods, when Nigeria's reserves are at their lowest and local supply is not sufficient anymore to meet demand.

Figure 19 shows prices of locally produced rice in selected wholesale and retail markets in the northeastern Benin-western Nigeria trade basin, including the wholesale and retail prices in Malanville, Benin, and the wholesale and retail prices in Ibadan, Nigeria. Monthly informal trade flows from Benin to Nigeria are plotted alongside the price data.

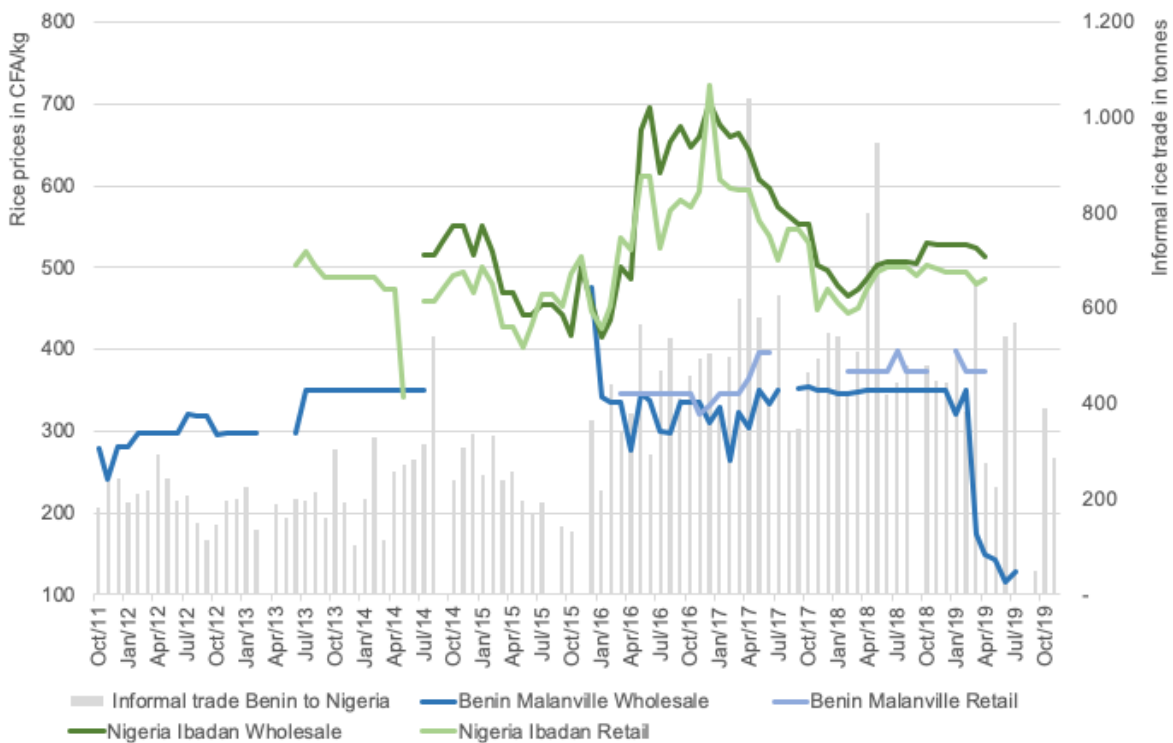
⁵⁸ Data were collected in the following markets: Bagou, Bante, Dassa, Glazoué, Gogounou, Malanville, Ouesse, Péhunko, Savalou and Save.

Figure 18. Seasonal trends in informal trade flows from Benin to Nigeria, 2012 – 2019 (2014 – 2018 five-year average)



Source: CILSS (2019).

Figure 19. Locally produced rice prices and informal trade flows in the northeastern Benin-northwestern Nigeria basin, 2011 – 2019



Sources: Prices FEWS NET (2019), except for Malanville wholesale (CILSS, 2019) and Ibadan wholesale (GIEWS, 2019). Informal trade: CILSS.

Market prices for locally produced rice in the Benin-Nigeria trade basin show a certain pattern. **Prices in Benin (Malanville) have been fairly stable in the past decade**, hovering around 350 CFA francs, except for a few episodic price hikes and drops (in early 2019 for instance). **In contrast, in Nigeria (Ibadan), rice prices have been fluctuating widely**, roughly between 400 and 700 CFA francs. Also, the levels of the wholesale and retail prices in Ibadan relative to one another is unusual: the wholesale price is higher than the retail price. Presumably, this could be due to a price measurement error, or to the measurement of prices for different products at wholesale and retail levels. **At the level of the trade basin, a notable fact is the large gap between the wholesale price in Benin and the wholesale price in Nigeria, which indicates a greater scarcity of locally produced rice in western Nigeria and a strong incentive for cross-border trade.** Trends in cross-border trade show that it responds to those price differentials. In 2016, when the price differential between Nigeria and Benin increased, also cross-border trade increased compared to the previous year (from around 200 t per month to 300 t per month). A similar increase in the price differential and trade also happened in 2014.

These price patterns seem to reflect underlying market structures and evolutions in the rice sector in this trade basin. In Alibori and Borgou departments, in Benin, rice processing (mainly parboiling) has still been predominantly artisanal and semi-artisanal, done at a small scale and locally based. Parboiling is an activity conducted by women, individually or in small associations, who handle small volumes and do not have access to a steady supply of paddy throughout the year. They do not operate as part of marketing networks that efficiently link rural areas and urban markets. The productivity of the processing sector has been relatively low, and the quality of products has been low too (high content of impurities, lack of uniformity in size and colour, and so forth). The rest of the marketing channel is also poorly efficient (CTA, 2019). This state of the value chain contributes to the relatively low prices observed in northern Benin.

Recent events have probably reinforced the situation described above. In 2016 and 2017, prices in Benin receded and behaved more erratically, instead of following the price trend in Nigeria, as would be expected if the markets on the two sides of the border were well integrated. **In 2016, two large, state-owned rice husking plants, one in Glazoué and the other one in Malanville, each with a theoretical capacity and a net capacity of 150 t and 90 t per day respectively, ceased their activities, causing severe disruption in the rice marketing channel.** These plants, overseen by the SONAPRA (*Société nationale pour la promotion agricole*), produced white milled rice and handled a large share of the domestic rice market, alongside semi-industrial rice mills operated by farmers associations, and artisanal and semi-artisanal parboiling units (Balaro, Soulé and Gansari, 2014). As we saw in Section 2, in 2016 the Nigerian government restricted overseas rice imports and tightened border controls to fight smuggling, which led to a rise in domestic market prices (Figure 19). Those controls also led to an increase in the demand for locally produced rice in Nigeria, as the supply of overseas rice dwindled. At the same time, it became more difficult to export locally produced rice from Benin. **Combined with an abundance of overseas rice in Benin, the market situation probably exacerbated the economic difficulties of Beninese parastatal rice companies.** Since then, cross-border trade in locally produced rice has grown and a large share of the Beninese paddy crop and parboiled rice output has been exported to Nigeria. **The Nigerian border closure in 2019 had an even more severe impact on cross-border trade.**

3.4. Effects of climate change on rice production and trade

This section adds to the analysis above some insights regarding the climate change factor, which is critical to elaborating forward-looking policy prescriptions. In West Africa, rice is grown in four agro-ecological zones: rainfed uplands (40% of the rice area), rainfed lowlands (38-40%), irrigated systems (12-14%) and mangrove swamps (4%). Rainfed systems are thus predominant, with smallholder farmers making limited use of commercialised inputs (improved seeds, mineral fertiliser and mechanical equipment) and having little direct access to post-harvest storage and processing facilities (Katic *et al.*, 2013). **By affecting rainwater availability and regularity, climate change is likely to affect rice production in West Africa** (Terdoo and Feala, 2016).

The incidence and severity of droughts are expected to worsen with climate change. Although rainfed rice systems, most common in West Africa, are especially vulnerable, irrigated lowland systems also face increased water stress and competition with other uses. Furthermore, surveys in hundreds of farmers' fields over the last ten years show that **climate change has a strong impact on rice diseases and pests** (Knaepen, Rampa, Torres and Bizzotto Molina, 2017). Most studies on climate impacts in West Africa go back to the beginning of the 1990s. Overall, the most severe yield decline, under climate change and variability, has happened and will continue to happen in hotter northern landlocked countries, such as Mali, and less in the cooler coastal countries, such as Ghana and Nigeria. Climate change and variability are affecting and will continue to affect rice production, productivity and, in some cases, grain quality, in Benin, Mali, Burkina Faso, Ghana and Nigeria (Terdoo and Feala, 2016).

In Benin, for instance, climate change during the period 1991–2015 has been observed through a decrease of rainfall and an increase in both minimum and maximum temperatures, affecting agricultural production and specifically rice yields (Arouna and Akpa, 2019). In Nigeria, where rainfed lowland rice accounts for nearly 50% of the total rice-growing area (USAID MARKETS 2009a, in Mereu *et al.*, 2018) **an increase in temperature will reduce net revenue for dry-land rice farms** (Ajetomobi, Abiodun and Hassan, 2011).

The intra-regional trade dynamics we previously described will certainly be affected by such changes, although it is difficult to foresee to which extent. More resilient rice production systems and less-impacted areas, such as cooler coastal countries, might gain a growing importance in regional rice production and trade.

Climate change also has an impact on rice-producing regions from where West African countries import rice, such as Asian countries, especially Thailand, India and Vietnam (see Figure 7). Sea level rise and resulting floods, which are important climate-change-induced risks in those rice exporting countries, will affect river estuaries and salt levels in tidal rivers. Consequently, there will be considerable paddy losses due to salinisation, land degradation and upriver movements of rice paddies (Chen, McCarl, and Chang, 2011; Knaepen *et al.*, 2017).⁵⁹ Previous research found that over the past 25 years, rice yields in exporting countries such as Thailand, Vietnam and India, have fallen by 10-20 % in some locations, as night-time temperatures have risen. Even in fully irrigated farms that grow “green revolution” rice crops, rice yields dropped due to the increase of daily and night minimum temperatures (Welch *et al.*, 2010).

Negative climate impacts are going to be also felt in other regions that export rice to West Africa, namely Brazil and, to a lesser extent, Uruguay. Brazilian rice grows in irrigated (one-third) and rainfed (two-thirds) upland systems. Climate change is likely to generate higher temperatures and decreased precipitation in four central Brazilian states that produce large quantities of rice (Ramirez-Villegas *et al.*, 2018). Moreover, according to FAO's 2018 report on

⁵⁹ For example, in the Vietnam Mekong Deltas, severe floods in 2000 led to crop failure, except for floating rice varieties. In contrast, below-normal seasonal rainfall in 2004 reduced water availability for irrigation due to high salinity, and as a result the dry-season rice that year could not be harvested (FAO, 2018).

The State of Agricultural Commodity Markets, **the increase of carbon dioxide in the atmosphere is directly linked to the nutritional quality of crops**. In the United States, another country exporting rice to West Africa, the impact of increased climate variability is being felt in the rice sector and a significant decrease in the concentration of zinc and iron in rice has been reported (FAO, 2018).

At the same time, **rice production, especially paddy rice cultivation, generates large amounts** (worldwide 9-11%) **of methane emissions**, that is, the most important non-CO₂ greenhouse gas (van Meijl *et al.*, 2017). Furthermore, **rice production has been linked to other negative environmental externalities such as air and water pollution** (due to high weed and pest pressure in rice production) as well as a steady increase in water utilisation (rice requires about twice as much water as other grain crops). Most rice lands can be considered degraded in one way or another. Downstream silting, nutrient mining, pesticide pollution, soil acidification, alkalization, toxicity, salinisation and other phenomena continue unabated in irrigated as well as rainfed rice ecosystems (Knaepen *et al.*, 2017).

4. Analysis of policy and institutional factors

This section provides an updated review of key national and regional policies and regulations (regarding extra-regional trade, domestic markets, and intra-regional trade) that have influenced rice marketing and trade in the countries of focus. It also analyses their trajectories, market effects, and interactions between countries.

4.1. Regional overview of recent rice policy developments

4.1.1. Rice policy context

The West African “rice problem” has been around for a long time, although its parameters have evolved. After becoming independent, states pursued **nationally-oriented economic development strategies**, heavily getting involved in economic activities. Those strategies **largely failed to effectively support staple food production, which was outpaced by the growth in food consumption needs**, and they also contributed to the deterioration of public finances. Besides, the fragmented exchange rate system among countries in the region further disrupted traditional agricultural trading systems. At the same time, as coastal cities were growing rapidly, the structure of staple food demand was changing, notably with rice substituting for traditional cereals. **As a result, imports of rice and other cereals, generally monopolised by the state (the *caisses de péréquation* in francophone countries), began to rise**. Food policies biased towards large urban areas also favoured the supply of imported rice at affordable and stable prices, which had become relatively abundant and cheap on the international market due to surpluses in other rice-producing parts of the world. Moreover, food aid played a significant role in the rising share of rice in diets following the climate shocks of the 1970s and early 1980s that caused severe shortfalls in locally produced cereals. As external food assistance largely came in the form of in-kind rice donations, both rural and urban households became used to eating more rice, and to the characteristics of the imported products.

Before the SAPs, states controlled the importation of rice, as for other cereals, and often sold imported rice at higher prices than the cost of importing it, generating substantial government revenue in that way. **The non-recognition of the private sector and heavy regulation of agri-food marketing and trade, for cereals in particular, favoured the development of a vast informal sector**, including informal cross-border trade in locally produced staples.

In the 1980s, the increase in cereal import dependency of West African countries led some states in the region, especially the CILSS members, to promote the creation of a 'Regional Protected Area for Cereals', including rice (Delgado, 1989). The main motivation was to raise the prices of imported cereals (rice and wheat) using tariffs harmonised amongst countries, to stimulate regional production and trade. But, at that time, this approach ran against the protectionist policies of other countries such as Nigeria.

Following the SAPs, **market deregulation and trade liberalisation (notably the ECOWAS Trade Liberalisation Scheme launched in 1990) did not lead to any major improvements in intra-regional trade in cereals**: barriers to trade at borders remained high and the private sector was not influential enough, or perhaps interested enough, in promoting regional market integration. Later, the 2008 food price crisis revived the debate about intra-regional agri-food trade, although agricultural policies have remained very much nationally focused.

4.1.2. Policy responses to the 2008 food price crisis

As elsewhere on the African continent, **West African governments responded to the 2008 food price crisis by immediately reducing import duties and other taxes on imported rice and other cereals. They also public agricultural expenditures to boost domestic cereal production—largely through an expansion of subsidy schemes for fertiliser, seeds, pesticides and equipment—and banned cereal exports.** With the support of the Coalition for African Rice Development (CARD), and in the regional policy context of the ECOWAS Agricultural Policy (ECOWAP), adopted in 2005, and the Comprehensive Africa Agriculture Development Programme (CAADP), they formulated national rice development strategies to increase domestic production in the medium term. The Ghanaian, Malian, Nigerian and Senegalese governments, notably, followed that approach. The Regional Offensive for the Sustainable Revival of Rice Production in West Africa, as part of the ECOWAP, was formulated to complement and support those national strategies, in particular to promote regional trade (ECDPM, 2018).

However, those policy measures presented some problems. Reductions in import duties usually entail large fiscal costs and they do not properly target the most exposed populations—the poorest are not the biggest consumers of rice, and traders do not pass on cost reductions to consumers to their fullest extent. Although the development of the rice sector requires public support, government initiatives after the crisis tended to focus mainly, if not exclusively, on-farm production, while inadequate support was given to develop marketing channels and encourage private investment in processing and distribution. At the same time, those initiatives mainly allocated resources to irrigation infrastructure and rice farming technological research, with the result that few benefits from those investments have reached smallholder farmers in non-irrigated rice production systems (USAID, 2009).

4.1.3. Regional trade policies

The Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU) are the two main regional economic communities in West Africa. Historically, formal economic integration has progressed faster among the smaller group of francophone countries constituting the WAEMU (Benin, Burkina Faso, la Côte d'Ivoire, Mali, Niger, Senegal and Togo). They entered a customs union in 1994, which became fully enacted in 2001, and adopted common sectoral policies, including a common agricultural policy in 2001. In the past 15 years, ECOWAS and WAEMU policies have become increasingly integrated and complementary. Notably, ECOWAS countries adopted a **Common External Tariff (CET)** in 2013, which was largely based on the preceding CET of the WAEMU, following the establishment of the ECOWAS Agricultural Policy, itself originating from the *Politique agricole commune de l'UEMOA* (PAU)⁶⁰.

⁶⁰ Both agricultural policies, the ECOWAP and the PAU, prioritise the rice sector.

The adoption of the ECOWAS CET in 2013 entailed the categorisation of imported goods according to five tariff bands, 0%, 5%, 10%, 20% and 35%⁶¹. **As it was the case under the WAEMU CET, rice was classified in the third band, with a 10% tariff, which provides little tariff protection for the regional market.** The CET entered into force in January 2015, although ECOWAS member states were allowed a five-year transitional period to implement the CET. **In practice, we will see in this section, ECOWAS countries have applied different tariffs to rice imports during this phase of the CET.** Nigeria, in particular, has continued to apply a much higher import tariff than WAEMU countries. This divergence in tariff policy illustrates the fact that national trade policies among ECOWAS member states have generally remained predominant over ECOWAS policies. **Although the harmonisation of agricultural trade policy is partly a technical issue, differences also reflect divergences in objectives among countries, particularly between WAEMU and non-WAEMU ones.** The negotiation of the CET was a balancing act between various socio-economic actors (consumers, producers, processors, traders and others) and countries with diverging interests, at least in the short-run, and different capacities of influencing policy decisions. In the case of rice, the interests of (net) consumers, political leaders wanting to keep rice affordable for low- and middle-income urban households, and importers, prevailed over those of producers (ECDPM, 2018).

In the framework of the Common Trade Policy, ECOWAS is developing other regulatory instruments for extra-regional trade, including a cyclical import tax (Supplementary Protection Tax⁶²); trade defence instruments to counteract uncompetitive trade practices in the international market (safeguard measures in the forms of quantitative restrictions or additional customs duties, anti-dumping measures in the form of additional customs duties, and anti-subsidy and countervailing measures⁶³); and sanitary and phytosanitary (SPS) regulations. However, non-tariff trade measures have not yet been harmonised between ECOWAS countries and these ECOWAS trade regulations are still largely ineffectual.⁶⁴ That is the case in particular for SPS regulations, with frequent reports of shipments of substandard rice entering the regional market in recent years.⁶⁵

Differences in import tariffs and regulations between countries are a key driver of illegal transshipments of overseas rice. Smuggling between Benin and Nigeria is a notable example. As this case shows, rice smuggling has become entrenched in local economies and politics. Unilateral changes in national rice import policies often create instability in neighbouring countries, the Nigerian ban on land imports of rice and other products in 2019 being a recent example.

The ECOWAS Trade Liberalisation Scheme (ETLS) promotes and regulates trade in goods within the regional bloc. In principle, the ETLS, which was adopted by ECOWAS member states in 1979, abolished import tariffs and non-tariff barriers to trade, notably for agricultural and food products. **In practice, however, the ETLS has been poorly implemented by member states, and various practices hamper cross-border trade in locally produced agricultural and food products** (Torres *et al.*, 2017). Economic operators moving goods across borders in the region, particularly small and medium-sized traders and transporters, are still liable to pay customs duties and constrained by non-tariff barriers linked to national policies and regulations (including quantitative restrictions and export bans in certain

⁶¹ The fifth band for a maximal import tariff of 35% was intended for sensitive products. It did not exist under the WAEMU CET.

⁶² See ECOWAS Regulation C/REG.1/09/13.

⁶³ See respectively ECOWAS Regulations C/REG.4/06/13, C/REG.6/06/13, and C/REG.05/06/13.

⁶⁴ According to an unpublished 2017 mid-term assessment of a GIZ-implemented trade facilitation programme in ECOWAS (WATIP), the Commission's current capacities (technical, organisational and institutional) to manage the Common Trade Policy, including the CET, the ETLS and other trade regulations, greatly limit its effectiveness, despite improvements achieved under this programme. Too little resources are allocated to strengthen capacities at the level of member states, and the private sector (the informal sector notably) is insufficiently involved in the design and implementation of policies and regulations (ECDPM, 2018).

⁶⁵ It should be noted that the Common Trade Policy of the ECOWAS does not provide for a customs union. Although rice imports into ECOWAS countries are in principle subject to the same import tariffs, customs procedures for the importation of extra-regional rice as well as other goods are managed by national customs agencies independently from one another.

seasons or during periods of food crisis). They also have difficulty in accessing documents on national trade laws, rules and procedures relating to the ETLS and thus often incur delays and fees (legal or not) for failing to comply with regulations and administrative procedures in both origin and destination countries. Transporters are constrained by differences in vehicle standards, inspection requirements, and axle weight limits, although ECOWAS member states were supposed to adopt harmonised rules and norms under the ETLS. The lack of clear information about rules and procedures in effect favours illegal practices by the authorities at border crossings. Traders and transporters often have to go through multiple border posts and redundant customs procedures, are harassed or subjected to unfair treatment by enforcement agents and pay bribes (INSAH, 2016, in FEWS NET, 2017), which increases transport time and costs and creates uncertainty for businesses.

The regional trade policies of ECOWAS are thus largely dominated by national trade policies. Hence, **to understand the role of trade in the performance of the rice sector in West African countries, it is important to examine national policies, as we will do in what follows.**

4.2. Central trade basin

4.2.1. Mali

The Government of the Republic of Mali has long pursued a rice policy aiming to secure adequate locally produced supplies for the country's consumption needs and to improve rural households' incomes. Mali has a fairly well-developed rice supply chain, by regional standards, in terms of production, processing and marketing efficiency. Also, the domestic rice market is backed by a consumer population with a marked preference for locally produced rice. Following the 2008 crisis, the state maintained a policy intended to tightly control imports.

Since 2000, Mali has applied the WAEMU (then ECOWAS) Common External Tariff (CET), which amounts to 10% for rice, in addition to other taxes and import duties. **Considering the 18% VAT, the protection of local rice in Mali would be of the order of 32% of the CIF value of imports.** If there is a risk of shortage, this protection may be modulated by the public authorities, by a suspension of customs duties, a momentary abolition of the VAT to limit the rise in consumer prices, or both. **However, the reported CIF prices have remained stable over the last ten years at around 120,000 CFA/t.** According to several specialists, these price declarations are truncated and do not reflect the reality of the costs because rice prices vary widely depending on quality and origin. **These truncated declarations constitute a source of unfair competition for local rice.** That is in part due to the fact that the Malian administration uses reference prices for the calculation of customs duties that are below prevailing import market prices.

Rice imports are carried out by **private traders**, who have to **submit intended rice import declarations to the *Direction Nationale du Commerce et de la Concurrence* (DNCC, National Directorate of Trade and Competition)** and declare rice import quantity, quality, purchasing price, origin and destination (Diakite and Bagayoko, 2014).

Import and export operations, including for rice, are governed by the *Decree* 505/PR-M of October 2000, regulating foreign trade, and the inter-ministerial order No. 9-0788/MEIC-MF-SG of April 2009, laying down the implementing rules for such *Decree*. For example, importers must meet certain requirements when submitting an import intention to the DNCC. These include the following:

- Justification of the status of importer through registration in the Trade and Personal Property Credit Register as Import-Export or Simple Importer;
- Possession of a tax identification card;
- Presentation of a valid Import-Export license;

-
- Payment of the contribution to the Import Verification Program;
 - Importation of the authorised quantity within the prescribed time;
 - Publication of the price charged within the limit of the wholesale price set by media outlets;
 - Indication of the import schedule and the geographic coverage of the distribution;
 - Communication to the Directorate General of Trade, Consumption and Competition every Thursday on the quantities imported, the quantities released to retailers, the places of delivery and in-store inventory;
 - Submission to the Directorate General of Trade, Consumption and Competition of the list of retailers of its distribution circuit by locality, indicating their contacts and addresses.⁶⁶

In addition, the state regulates rice imports based on the level of dry cereal production, which is often dependent on weather conditions. Each marketing year, the Malian government assesses the gap between domestic production and demand, and, on that basis, determines the quantity of rice the country should import during that year. **If the domestic rice supply is deemed insufficient by the national authorities, or in case of circumstances deemed exceptional (Ramadan, lean season), the government grants exemptions of customs duties and VAT to the traders** (under specific conditions on the imported product, tax base, distribution terms, as well as time bounds).⁶⁷ This is done to ensure a proper supply of the market at affordable and stable prices. However, some observers report that **annual estimations of import needs are often flawed, which would result in a surplus of imports that disrupt the functioning of the domestic market**, particularly when farmers put their crop on the market. Importers are believed to exert a strong influence in rice policy-making, in particular in the definition of rice import quotas at a preferential rate.⁶⁸

These tax exemptions constitute a major limitation to the regulatory mechanism established a decade ago. For instance, between 2006 and 2010, Mali imported 500,000 t of rice exempted from customs duties and VAT. The CIF value of this rice is estimated at 62 billion, i.e. an exemption of 20 billion CFA francs over the period, representing an average annual loss of 4 billion for the government (Diakité and Bagayoko, 2014). In 2012, 120,000 t of unscented rice were also exempted from the 10% customs duty and the 18% VAT.

The granting of import duty exemptions for rice, which could be justified by the objective of balancing rice availability and consumption needs or ensuring accessibility for the poor, **appears to be related to some extent to discretionary decisions favouring certain operators who are not engaged in local value chain development**. That is a source of contradiction with policies promoting domestic value chain development and rice farming. Furthermore, tax revenues generated by rice imports, given a high share of informality and thus low taxation in the domestic rice economy, represent a considerable incentive to maintain the current trade regime.

In 2017, the European Union, as part of its sector budget support, put pressure on Mali to minimise distortionary market interventions in the form of tax exemptions favouring a category of actors (an oligopolistic group of importers) with significant risks of corruption and little guarantee of effectiveness. Many of the people we interviewed during our visit in April 2019 agree that the choice of importers who benefit from the exemptions is not always transparent, thus suspecting deals with links in the administration. The administration reacted by stating that no exemption for Ramadan or the lean season was granted during the first three quarters of 2017. The only exemptions granted concerned industrial promotion (*Moulins Modernes du Mali*: 67,500 t), international organisations (ICRC, UNICEF, MINUSMA, French Embassy: 16,877 t) and an international NGO (Catholic Relief Services: 1,682 t). Two observations to highlight in this regard:

⁶⁶ See articles 6 and 11 of the inter-ministerial order.

⁶⁷ In 2019, for example, the specifications for the special rice import operation were for unscented broken rice, with the application of a taxable base of 100,000 CFA/t. The contracting company had to set up its own distribution chain and ensure a maximum wholesale price of 300,000 CFA/t and a maximum retail price of 350,000 CFA/t.

⁶⁸ They are believed to finance politicians' campaigns, receiving in turn benefits to facilitate their business operations.

- Because of the security situation in Mali, **international organisations and NGOs tend to import rice to help the poor or insecurity victims without a clear idea of rice availability on the domestic market** and without proper communication with stakeholders in the sector, thus contributing to price volatility.
- It is not clear what is considered industrial promotion when guaranteeing tax exemptions on imports of 67,500 t for a large firm.

Moreover, it has not been established that Mali has waived the use of exemptions in the exceptional importation of rice. At the time of our visit, a special import operation was planned with an exemption from duties and taxes. This intervention would be linked to commitments made by the government in response to union demands for addressing the high cost of living.

Regarding **sanitary regulations**, a certificate is usually delivered by the first Malian check-point when a shipment crosses the border. This certificate should guarantee that products are compliant with Malian norms, and it allows them to reach their destination. However, sanitary certificates are almost always discarded by customs officers from other checkpoints on the road leading to Bamako, for example, to prompt informal payments. Moreover, importers' operations are affected by the insufficient number and capacity of laboratories, whereas they are necessary to carry out compliance tests at the ports of entry. Therefore, imported products are sent to Bamako to be analysed, which leads to a delay of three to four days. Importers often make informal payments to speed up the process and avoid significant losses (ITC, 2018). Since 2007, verification of import and export products for quality standard conformity has been ensured by the company BIVAC International (Bureau Inspection Valuation Assessment Control) which delivers a certificate of validation. This inspection can last one to two weeks.

On the domestic market side, **the advanced state of development of the Malian rice sector can probably be traced back to early efforts of the Malian government to reform the cereal sector in the 1980s**. Already in 1981 – 1982, with the *Programme de restructuration des marchés céréaliers*, the government began to reduce the involvement of the state in the marketing of cereals and to liberalise markets (until 1982, the *Office des Produits Agricoles du Mali*, OPAM, a parastatal company, exerted a monopoly over cereal marketing). Yet, at the same time, the state did not eliminate its support to the cereal sector, in particular for rice. It actively supported the continued development of the sector with the provision of infrastructure and services helping rice producers and processors (especially in the *Office du Niger* and in the Ségou and Mopti areas; Akande, Cisse, and Kormawa, 2007), as well as with measures to favour price stability in the domestic market. Private initiatives (organisation of value chain actors, private investment, and so forth) have been encouraged.⁶⁹

Also, **already in the late 1980s, public authorities required Malian rice importers to buy a certain amount of locally produced rice**. Although nowadays this type of regulation is common in the region, it is notable that the Malian government pushed for this approach early on. Several rice importers in Mali have in fact established large rice mills to process local rice.⁷⁰

⁶⁹ Different types of farmers organisations have been developing in Mali, such as: Large Marketing Cooperatives, which obtain commercial volumes from their members through different mechanisms; Service Provider Associations, originally created to provide a particular line of services to farmers, over time they have elaborated various services—largely focused on enhancing bargaining power in output markets on behalf of their members, but in some cases for training services or financial services (caisses villageoise d'épargne et de crédit autogéré). Although the organisation of actors in the rice value chain remains weak (despite the numerous public and donor-sponsored initiatives to strengthen the rice interprofession), these initiatives suggest that producers are quite active in organising to better access markets and inputs. The National Platform of Rice Producers of Mali (PNPR), a young professional agricultural organisation grouping more than 300 organisations of rice producers (through 7 regional representations) seems promising in terms of leading the much-needed interprofession strengthening process.

⁷⁰ An example is Modibo Keita, who owns the company *Grand Distributeur Céréalière au Mali* (GDCM). GDCM buys rice from small mills to produce a higher quality product for the upscale consumer market. In 2010 the company took 7400 ha on lease to produce paddy and other agricultural products for its processing and trading operations, in addition to what it procures from other producers.

Currently, **the Malian state does remain an important operator in the domestic procurement and distribution of traditional cereals and rice, particularly to manage the *stock national de sécurité* (national food security reserves) and the *stock national d'intervention* (intervention reserves).** These stocks are managed by the OPAM, which is overseen by the *Commissariat à la Sécurité Alimentaire* (CSA, executive council for food security) established in 2004. The OPAM also ensures that cereal banks are established in all Malian municipalities and are adequately supplied. To do so, the OPAM resorts to direct procurement from rice producers' associations or purchases from millers. Since 2018, the OPAM's procurement process has involved the Malian rice *interprofession*. Although the private sector handles the largest share of the rice market and prices are largely driven by the market, public procurement (for public food reserves, schools, the army, hospitals and other institutions via tenders) represent a significant share of the market.^{71, 72}

Regarding trade of locally produced rice, although there is no official ban, which would be contrary to the ECOWAS Trade Liberalisation Scheme (ETLS), unofficially public authorities frequently prohibit cereal exports. The often-cited motive of the government is to avoid the "leakage" of staple food commodities that it subsidised. Yet, rice exports to neighbouring countries still happen, but informally.

For example, prohibitions on the export or re-export of food products, including rice, were decided in the aftermath of the food price crisis.⁷³ These measures seem to have had a moderating effect on prices. Prices generally continued to rise even several months after the introduction of the prohibitions. When prices finally fell, it was because of the arrival of the new crops in October. The observation made by operators in the field reveals that export bans have had the effect of **increasing transaction costs** (mainly because of "informal taxes"). Reportedly, transaction costs, which were 60,000 CFA francs per truck of 60 to 80 t when exports were legal, increased to 500,000 CFA francs on the various border routes (without taking into account other fees paid after the Mali border).

4.2.2. Burkina Faso

In the wake of the 2008 crisis, the Government of the Republic of Burkina Faso ramped up public support to the rice sector. Like other West African countries, it first took measures to quickly lower rice prices and replenish stocks. Those included the **temporary suspension of customs duties and VAT on cereals, in particular rice. Furthermore, since the food price crisis, the government has tightly controlled the imported rice market.** This has probably contributed to the stability of prices, which have remained in the range of 350 to 400 CFA/kg.

The government also took measures to increase domestic rice production, with the aim to eventually attain self-sufficiency (Hathie, 2018; Sawadogo, 2015). In 2011 it launched the national rice development strategy with the objective of quadrupling rice output by 2018. This strategy rested on four pillars: an expansion of the rice cultivation area, an increase in yields, improved post-harvest handling and marketing, and the development of new technologies. Shortly after the crisis, the government launched programmes to provide more subsidised seeds and fertiliser, as well as more training and advisory services particularly for large irrigated schemes (Hathie, 2018; FEWS NET, 2017). At the same time, the government set a floor price for locally produced paddy (115 CFA/kg from 2008 to 2012, and 130 CFA/kg from 2012 onwards), following consultations with rice farmers. **Those interventions were quickly followed by a growth in rice production, by 25% annually from 2008 to 2017, on average.**

⁷¹ Prices offered by public purchasers are often lower than market prices, and payments tend to be delayed, and so farmers usually prefer to sell their crops to private traders.

⁷² The World Food Program is the other major institutional buyer of rice in Mali.

⁷³ The first measure covered the period of 3 July to 3 September 2007 (Interdepartmental Order No. 07-1622 of July 3, 2007). The second measure was not limited in time. It ran from December 31, 2007 to December 9, 2008 (Order No. 07-3405 of the Ministry of the Economy, of Industry and Commerce of December 31, 2007 and Order No. 08-3438 / MEIC-SG of December 9, 2008, repealing the previous order).

With rapidly rising output, the government was confronted with a glut in the market for paddy. To facilitate the marketing and processing of rice, in 2009 it tasked the SONAGESS (*Société nationale de gestion des stocks de sécurité*), the state-owned company that administers both the national food security reserve and the intervention stock, with scaling up the procurement of paddy from farmers and the processing of it into white rice and parboiled rice in partnership with millers (FEWS NET, 2017; UNPRB and VECO-WA, 2014).⁷⁴

Yet, despite those policies, rice imports continued to rise at a fast clip, by 18% annually from 2008 to 2016, on average. This suggests that policies that promoted primary rice production did not result in much substitution away from imported rice and towards locally produced rice. At the same time, Burkina Faso continued to receive non-negligible quantities of rice donated as part of food aid programmes, mainly from the United States (US). The SONAGESS, with guidance from the government, manages in-kind distribution and monetisation of food aid in areas of the countries with food production shortfalls and vulnerable populations (e.g. free distribution or sales at social prices; Sawadogo, 2015).⁷⁵

The import tariff for rice has been set at 10% since the implementation of the WAEMU customs union in 2000. As in other countries of the WAEMU zone, however, it seems that the **Burkinabe administration still uses “mercuriales”**, that is, reference cost-insurance-freight (CAF) prices, to determine the value of rice shipments and calculate customs duties.⁷⁶ According to a source at the Customs Directorate, the reference value of 135,000 CFA/t is routinely used, which is well below prevailing market prices. Other things held constant, this practice reduces the cost of importing rice into Burkina Faso and increases the quantity imported.

The main trade regulatory framework in Burkina Faso is the Law of the general regime on imports and exports. It specifies rules and procedures that national and international actors must comply with to carry out trading activities.⁷⁷ Under this framework, according to the procedure for shipments above CFA 500,000, **importers have to submit to the public administration a *Déclaration préalable pour les importations* (DPI)**. A rice importer also has to provide an invoice issued by the supplier in the exporting country. For imports from outside the CFA franc zone amounting to more than CFA 10 million, a request for authorisation of foreign exchange must be submitted by the importer's bank. Since 2016, exporters and importers have been able to submit the required documents through an online single-window system. These procedures can also be done by a freight forwarder on behalf of the importer.

Imported rice has to fulfil certain qualitative requirements. With the DPI, the importer must provide a phytosanitary certificate issued by the authorities in the exporting country. Upon entry into Burkina Faso, as part of procedures administered by a local customs office, in principle, the rice shipment undergoes a quality control. Its release is conditioned upon the delivery of a quality certificate by the *laboratoire national de sécurité* of the normalisation agency. In addition, the phytosanitary certificate has to be verified by the Ministry of agriculture. **Following a recent bout of rumours regarding the importation of poor-quality rice in Burkina, between late 2018 and early 2019, consumer groups have pressured the government to block such shipments.** In response to those complaints, the government reportedly strengthened the enforcement of phytosanitary regulations. The Ministry of trade now requires rice shipments to be held in warehouses for thorough quality tests before the rice is distributed in the domestic market.

⁷⁴ The SONAGESS was established in 1994 initially to manage the food security reserve (Decree No 94-133/PRES/MICM).

⁷⁵ Burkina Faso still receives non-negligible quantities of rice donated as part of food aid monetisation programmes. The US is by far the largest provider of food aid, providing more than half of the total volume (UNPRB and VECO-WA, 2014). US food aid is partly distributed and partly monetised (sold at below market prices) in the framework of development projects implemented by American NGOs, notably Catholic Relief Services and, to a lesser extent, Africare, which sell it to local merchants.

⁷⁶ Based on ECDPM fieldwork, April 2019.

⁷⁷ The trader protection law and the law on the organisation of competition also regulate international trading activities.

Despite major economic reforms in the 1990s, **the Burkinabe state has remained a significant actor in the domestic rice market.** The SONAGESS, whose mandate includes regulating domestic cereal markets and supplying public organisations (public schools, hospitals, the army, prisons⁷⁸), represents a major actor in the rice sector (UNPRB and VECO-WA, 2014). For instance, in 2014 it accounted for **more than 15% of sales of locally processed rice by industrial and semi-industrial mills.** It also bought **nearly 45% of the output from small-scale parboilers** (CIR-B and VECO-WA, 2015). The intervention stock, which was established in 2005 and scaled up in 2009, is currently the main market support instrument to fulfil this mission. The stock contains cereals, including locally produced rice, and pulses.⁷⁹ The agency also provides farmers with credit to finance the crop cycle, who pay off their loans by transferring part of their harvest to the SONAGESS. Rice millers and steamers that have contracts with the SONAGESS have easier access to loans from commercial banks for their working capital in addition to a secure market, which might compensate them for the relatively low profit margins that they obtain (Sawadogo, 2015; UNPRB and VECO-WA, 2014).

Looking at policies and institutional arrangements before the 2008 crisis, it appears that the Burkinabe state continued to be involved in the rice market to a large extent even after the structural adjustment programmes implemented in the 1990s, through a tight linkage between the cereal sector policy and the food security policy. The first agricultural sector adjustment programme for 1992 – 1995 led to the withdrawal of the state from agricultural production, the removal of input subsidies, and, except for wheat, rice and sugar, the liberalisation of agricultural markets, prices and external trade. The OFNACER (*Office national des céréales*), which had a mandate very similar to the SONAGESS currently, was liquidated in 1994. Only towards the end of that period, in 1995, the government began to let private operators import limited quantities of rice, although it maintained control over prices (FAO, 1996).

The second agricultural sector adjustment programme, for 1996 – 1999, pursued those policy and institutional reforms, resulting in particular in the further liberalisation of rice markets and trade (FAO, 2009). **Restrictions on rice importation by the private sector were further eased, while the *Caisse générale de péréquation* (CGP), which had the monopoly on that activity and used part of the sale proceeds to support the domestic sector, was dismantled** (FAO, 2009; Sawadogo, 2015; FEWS NET, 2017). Public enterprises involved in primary production, collection, processing and distribution of rice were privatised, notably the SONACOR (*Société nationale de décorticage et de commercialisation du riz*; Van der Schaaf, 2008), which led rice farmers to have difficulties marketing their harvests.⁸⁰ To support them, the government authorised the establishment of the SOPROFA (*Société pour la promotion des filières agricoles*), owned at 75% by Swiss actors, which took over the role of the SONACOR in supporting the marketing of locally produced rice. Yet, the SOPROFA was dissolved in 2003 after failing to pay producers and causing an outburst of protests throughout the country (FEWS NET, 2017; Van der Schaaf, 2008). Later, the SONAGESS was established within a new institutional framework to implement the cereal and food security policies.

Currently, the SONAGESS procures in priority locally produced rice. However, that policy has limitations: firstly, when there is a shortage of locally produced rice, the SONAGESS can buy imported rice (this is what usually happens for emergency food assistance); secondly, donor-sponsored food aid monetisation programmes provide overseas

⁷⁸ University canteens and hospitals in the main urban centres, however, mainly buy imported rice from private suppliers (UNPRB and VECO-WA, 2014).

⁷⁹ The government also created the intervention stock to have a flexible instrument to respond to localised emergency situations (natural disasters, short-lived market shocks and so forth), whereas the food security reserve can only be activated under certain circumstances, such as a severe cereal deficit at the national level. Staple food commodities from the intervention stock are distributed to vulnerable households usually through subsidised sales by authorised retailers (Sawadogo, 2015).

⁸⁰ The SONACOR supported the domestic rice sector by collecting, processing and distributing locally produced rice. It was financed by the CGP. However, it frequently failed to pay the producers integrally and timely. It went bankrupt in 2000.

rice, although the World Food Programme initiated a local procurement scheme relying on contracts with smallholder rice farmers in the second phase of the Purchase for Progress programme that started in 2014 (UNPRB and VECO-WA, 2014); thirdly, it has been reported that some private actors have sometimes benefited from access to the SONAGESS market for locally produced rice while in fact supplying imported rice (Sawadogo, 2011). Also, although the SONAGESS specifies quality and food safety norms for the locally produced rice it purchases (moisture, integrity of grains, cleanliness and so forth), the rigour of testing procedures, the enforcement of norms and the appropriateness of standards present some gaps. That has hampered efforts to improve the quality of rice and thus its appeal for consumers (UNPRB and VECO-WA, 2014; CARI, 2016; Sawadogo, 2015).

In short, Burkinabe rice policies have had the effect of largely deregulating rice imports and to some extent discouraging private sector development in the domestic rice value chain. Unlike other countries, Burkina Faso has not developed a mechanism to condition imports upon local procurement (a source from the Ministry of Agriculture indicated that this type of mechanism was being discussed).⁸¹ The ANACORD-B (*Association Nationale des Commerçants de Riz du Burkina Faso*) planned to set up a mechanism to ensure the quality of locally produced rice (UNPRB and VECO-WA, 2014), but that has yet to be implemented. Furthermore, **seasonal restrictions on cereal exports imposed by the Burkinabe government most likely have hindered the marketing of locally produced rice through cross-border channels**, adversely affecting producers.

4.2.3. Ghana

Immediately after the food price crisis of 2008, the Government of the Republic of Ghana elaborated the National Rice Development Strategy for 2008 – 2018. It also increased input subsidies for rice cultivation (seeds, fertiliser and farm equipment). As a country having natural endowments suitable for rice production (water in particular), a growing economy and a relatively good business environment,⁸² Ghana attracted domestic and foreign actors who invested into rice cultivation, processing and distribution. **These factors contributed to a rapid increase in rice production, which grew by 16% annually between 2008 and 2017.**

Since 2003, the import tariff for rice has been set at 20%. In addition, based on the CIF price, imported rice attracts a 12.5% VAT and other small levies, including a 2.5% National Health Insurance Levy, a 1% inspection fee, a 0.5% Community Levy for ECOWAS, a 0.4% Ghana Customs Network tax, and a 0.5% Export Development and Investment Fund levy. **These levies add up to 37.4%.**

When rice prices peaked in 2008, the Ghanaian government temporarily removed customs duties and reduced the VAT on rice.⁸³ The import tariff was reinstated in late 2009 when international prices went down. The 20% tariff in Ghana is higher than the ECOWAS CET of 10%, although Ghana was supposed to implement the ECOWAS CET starting in 2016.⁸⁴ Currently, the gap between the rice import tariff in Ghana and that in Côte d'Ivoire (10%) is significant and presents a strong incentive for both legal and illicit transshipping. **These policy parameters probably contributed to a marked growth in net rice imports in Ghana between 2008 and 2016, by 36% annually.**

⁸¹ Based on ECDPM fieldwork, April 2019.

⁸² Ghana ranks high in the World Bank's Ease of Doing Business Index (11th amongst Sub-Saharan African countries and first amongst West African countries in 2019). It has put in place policies favourable to private sector development and investment.

⁸³ The VAT was 12.5% in 2009 (USAID, 2009).

⁸⁴ Although rice was assigned to the 10% tariff line of the ECOWAS CET, member states were given leeway in applying the common tariff schedule during the first five years, from 2015 to 2020, which Ghana probably took advantage of by maintaining the previous tariff level.

An administration official indicated that the Ghanaian government would be favourable to an increase in the ECOWAS CET, from currently 10% to 20%.⁸⁵ In fact, before 2008, private actors in the rice sector and members of the parliament supported an additional levy on rice imports of 5%, to finance a national rice development fund. For a short period, this levy was implemented, but it was scrapped in 2008 as the government wanted the price of imported rice to go down. **In Ghana, as in other countries in the region, customs duties are sometimes adjusted depending on market circumstances, including through the use of reference price values that differ from actual market prices and based on which customs duties are calculated.** During Ramadan and other periods of peak demand, customs duties are often lowered by the administration. Some observers also mentioned allegations of customs duty evasion through under-invoicing.

In Ghana, **a licensing system regulates the rice importation sector.** In recent years, private actors in the domestic rice sector pushed for a scheme mandating purchases of locally produced rice in proportions to overseas rice imports. According to different sources in the public administration and the private sector, the government has been slow to pursue this policy. A recent ‘Memorandum of Understanding for the Marketing of Ghana Rice’ issued by the Ministry of Agriculture and Food in December 2019 outlines a scheme whereby imports would be limited to the difference between estimated national consumption and production. Yet, importers who reportedly attempted to source rice locally had difficulties finding rice in adequate quantities and meeting standard quality requirements. That reflects the shortcomings of the rice strategy of the Government in structuring the domestic market and integrating smallholder farmers to rice supply chains.

The Ghanaian administration recently started using a **single-window system** that allows importers and other parties involved in international transactions (suppliers, traders, shippers, banks, insurance companies and so forth) to electronically submit documents to a single entity to fulfil any export, import or transit-related regulatory requirements. These documents typically include applications for export and import permits, customs declarations, and other supporting documents such as certificates of origin. A rice importer’s bank must also lodge in the system a foreign exchange authorisation for the amount of the transaction.

As part of import regulatory requirements, rice importers must ensure that the rice exporting country issues both an export permit and a phytosanitary certificate, and also an invoice, a bill of lading and an insurance policy. These documents have to be submitted to the Ghanaian administration through the electronic single-window system. According to a Food and Drugs Authority (FDA) regulation, the import documentation must mention the crop year. According to a source at the FDA interviewed for this study, **despite these requirements, guaranteeing the traceability of rice remains a challenge.** Another Ghanaian public administration officer evoked recent talks about setting up a third-party certification scheme for Asian suppliers.⁸⁶

Upon arrival to Ghanaian ports, overseas rice shipments are inspected by public authorities. Before customs clearance, the Plant Protection and Regulatory Services Directorate (PPRSD) of the Ministry of Food and Agriculture inspects shipments for pests and diseases. That inspection is usually done visually—not through tests in the laboratory, although the PPRSD takes into consideration the level of risk associated with countries of origin. After customs clearance, the Ghana Standards Authority (GSA) conducts tests for pesticide residues and other standards; these tests can be done at one of the two laboratories at the Port of Sekondi-Takoradi and the Port of Tema.⁸⁷

⁸⁵ Based on ECDPM fieldwork, April 2019.

⁸⁶ Based on ECDPM fieldwork, April 2019.

⁸⁷ For incoming rice that is destined to another country, for example Burkina Faso, rice is treated by the customs office as a transit good. No test is performed. After passing through customs, the rice is loaded onto trucks and transported to the port of entry in Burkina. As the interconnection of customs between Burkina and Ghana has been operational since March 2019, the DPI leads to one single transit declaration for both the Burkinabe and Ghanaian administrations.

The Food and Drugs Authority oversees the post-customs clearance control procedure applied to rice imports for quality and food safety controls.^{88, 89} Rice importers have to be registered at the FDA, registration has to be renewed every three years, and inspection of an importer's warehouses by the FDA is part of the registration process. Every incoming shipment of rice has to be approved by the FDA, which delivers market authorisations under the oversight of a committee. Market authorisation does not necessarily require laboratory tests; tests are usually conducted randomly, presumably based on risks, as part of the market surveillance mechanism. The rice product that will be sold in Ghana must display a best-before-date.

Regarding rice market regulation (phytosanitary rules, quality norms and food safety), **the PPRSD does not control all the paddy marketed at farm level in Ghana, as for other agricultural products.** Rather, it uses its few resources mainly for the control of seeds imported from West African countries (Burkina Faso, Côte d'Ivoire and Nigeria) and overseas, to prevent the entry into the national territory of pests, diseases and genetically modified organisms.⁹⁰ For that purpose, it employs laboratories in the regions near ports of entry. Beyond the level of farm product marketing (processing and distribution), **the Food and Drugs Authority is in charge of ensuring that the rice put on the domestic market fulfils standards and food safety requirements.** The GSA recently put in place the first 'Paddy Rice Standard' in Ghana and revised the 'Milled Rice Standard', based on the Codex Alimentarius.⁹¹ The enforcement of these standards remains weak, however, and it focuses on the formal sector, which represents a minor fraction of the rice market.

Several policy-related obstacles have remained in the way of rice value chain actors. As for other sectors, the fertiliser subsidy scheme has been plagued by a poorly functioning, publicly controlled distribution system, with fertiliser supplies often not reaching the right producers at the right time and in the right specifications. The seed sector has been hampered by the slowness of the approval process for new varieties, other seed regulations (for example, the legal commercialisation of seeds multiplied outside the country is strongly restricted) and the scarce involvement of the private sector in varietal development (the organisations in charge of developing new varieties and multiplying seeds were dismantled during the structural adjustment period). Currently, **the local supply of certified and improved rice seeds is insufficient to meet the demand.**

The National Food Buffer Stock Company (NAFCO), the parastatal organisation that oversees and supports the development of staple food commodity markets plays a significant role in domestic rice marketing. NAFCO is in charge of the national food security stock as well as the intervention stock. Public cereal stocks are made of maize mainly and modest volumes of rice. NAFCO also has the mandate of supporting market access for farmers and reducing post-harvest losses through public procurement. It also supplies public organisations with staple foods (schools, hospitals, the army, and so forth). However, although NAFCO plausibly helps some farmers sell their crops at a minimum guaranteed price, some actors see the activities of NAFCO as causing market distortions and providing little incentive for enhancing rice quality management.⁹² Besides, **since the 2008 crisis, the government has banned exports of locally produced rice.** As NAFCO has had financial difficulties in recent years, the government is trying to reform the organisation.

⁸⁸ Regarding food safety, the Plant Protection Directorate plays an increasing role in controlling aflatoxin.

⁸⁹ Possible food safety issues include for example chemical contamination such as arsenic from irrigation water, and heavy metals.

⁹⁰ Although genetically modified (GM) rice has been tested in Ghana, no GM variety has been authorised for cultivation and marketing yet.

⁹¹ *'The Codex Alimentarius is a collection of internationally recognized standards, codes of practice, guidelines, and other recommendations relating to foods, food production, and food safety.'* It serves to *'protect the health of consumers and ensure fair practices in the international food trade'*.

⁹² Pers. comm. with value chain actors in Ghana, April 2019.

4.2.4. Analysis of policy interactions in the central trade basin

Following the characterisation of the structural rice policies of our focus countries in the central trade basin (Mali, Burkina Faso, and Ghana), in this section we compare the trajectories of domestic rice sectors and look at how national policies have been interacting and driving market outcomes at the sub-regional level. We pay particular attention to trade policy events and their (direct and cross-border spillover) effects in terms of rice importation and intra-regional trading. We include Côte d'Ivoire in the analysis as this country is a major driver of rice import trends in West Africa (see Figures 5 and) and a key port of entry for overseas rice in this trade basin.

The review of national policies that precedes shed light on structural factors that drive current import and intra-regional trade dynamics. **Past policies** (since before 2008), **probably linked to pre-existing economic and social structures** (historically strong Malian cereal traders networks, past large-scale investments in irrigated schemes) **resulted in different levels of development of domestic value chains, for example, between Burkina Faso and Mali.** Burkina Faso illustrates more clearly the lack of a sound regulatory framework and investments into downstream links of the rice value chain. In addition, the long-time and persistent involvement of the Burkinabe state in cereal marketing is marked by issues, with little room having been made for the private sector and private-sector-led structuring of markets. Conversely, Malian marketing channels seem to operate more effectively (as the marketing margin analysis suggested) and in more structured markets (with an early reform of domestic cereal markets, an early attempt to couple local procurement with imports, government-supported investments in large rice mills, and the promotion of Gambiaka rice). Also, the regulation of rice imports is more stringent than in Burkina Faso.

Ghana has had relatively high import tariffs on rice, although, like in Burkina Faso and Mali, its tariff policy has lacked consistency. To date, public support to rice production has been relatively low and irregular, especially for the development of linkages between farm producers and processors, like in Burkina Faso. Moreover, while some rice is exported from Burkina Faso to Ghana, within the Upper Volta river basin, driven by a strong industrial and consumer demand in northern Ghana, this trade remains in the informal sector.

In **Côte d'Ivoire**, domestic production has increased significantly since 2012, mainly as a result of renewed public-private investment in the sector (Figures 4, 5).⁹³ However, imports have continued to rise, with the sum of domestic production and imports far outstrips domestic needs.⁹⁴ This incentivises re-exportation practices. Reportedly, **considerable volumes of rice that enter into the Ivorian territory are then re-exported to neighbouring countries, particularly Ghana.** In addition, while local production surpassed imports between 2013 and 2016, in recent years (2017 – 2018), the balance has reversed again in favour of imports.⁹⁵ This suggests that the high import levels in this country respond to a need to increase the business portfolio of large importers rather than to a poor performance of local rice production. In short, even though efforts are being made to develop domestic production, **the country's trade policies deter economic operators from investing in local and regional value chains** and hinder the structural competitiveness of the local market, while benefiting main operators in the import system (Traoré, 2018; ECDPM, IPAR and LARES, 2019).

⁹³ After revising the rice development strategy for the period 2012 – 2020 in February 2012 (with the objective of raising output to 2.1 million t by 2018), the Ivorian government signed two partnership agreements: (i) in September 2012 with the Singaporean Export Trading Group (ETG) and sector representatives to invest 79 billion CFA francs (167 m US dollars) in processing capacity, inputs and machinery in six northwestern regions of the country; and (ii) in January 2013 with Dreyfus, to boost rice production by 300,000 t, particularly in the northern areas of Poro, Tchologo and Bagoué (FAO Commodity Policy Developments, retrieved from <http://www.fao.org/economic/est/est-commodities/commodity-policy-archive/en/>).

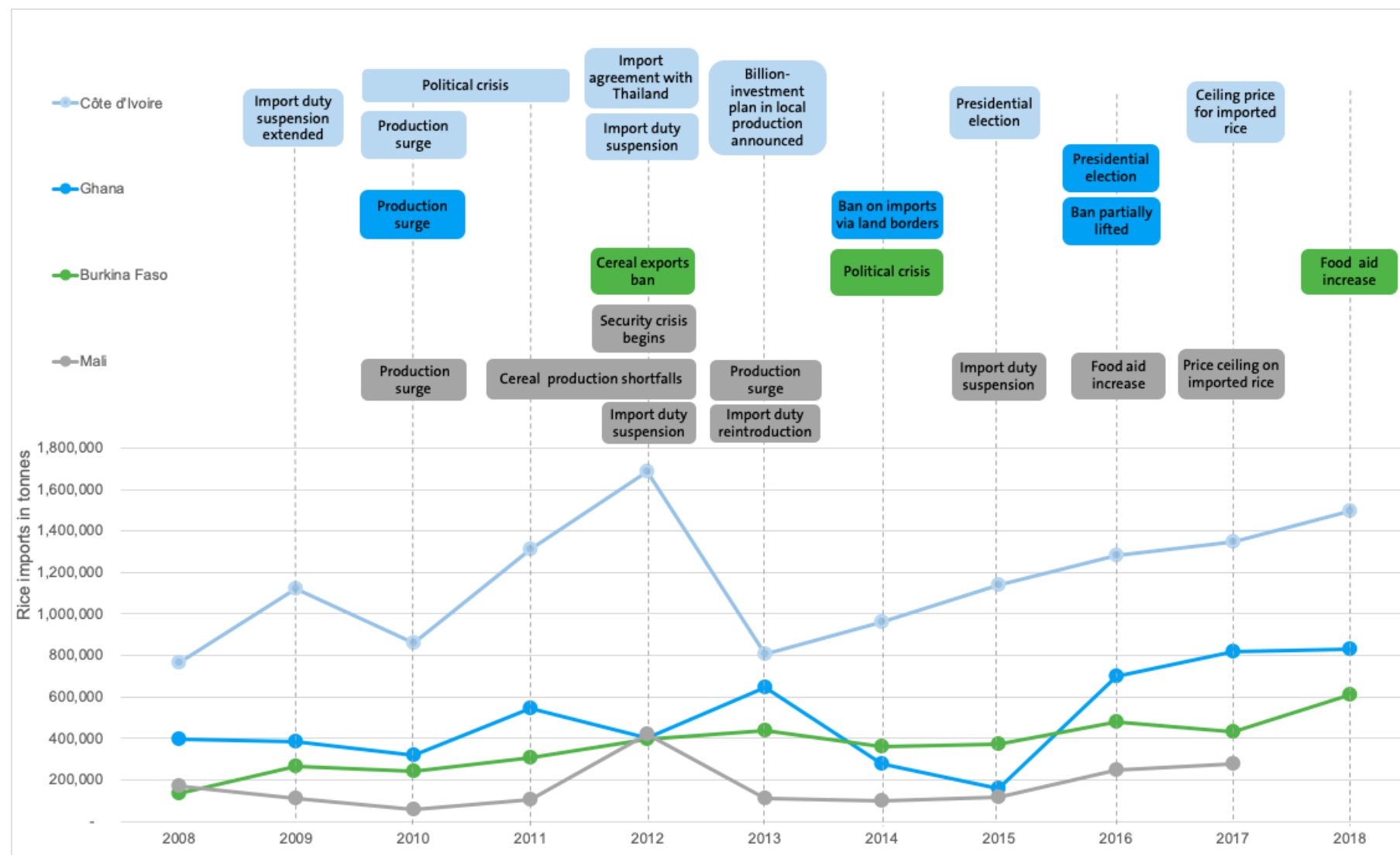
⁹⁴ Most of the excess in imports are explained by movements in the volumes imported by the major importer, SDTM-CI, who holds a quasi-monopoly in the country.

⁹⁵ Based on data from the *Agence pour le Développement de la filière Riz en Côte d'Ivoire* (ADERIZ), 2018.

We now turn to the analysis of national import policies and in particular of their implications in countries other than those in which they are initially implemented, and in the region as a whole. **We focus on selected, clustered policy events that took place in the post-2008 period and seem to have influenced rice trading dynamics in the central basin:** first, the major cereal production shortfall in the Sahel in the marketing year 2011 – 2012, which led the Malian government to take temporary measures concerning rice importation; second, the trade-related regulatory measures implemented by the Ghanaian government in 2014 – 2015 in an attempt to stop rice imports through land borders; and third, the market interventions of the Malian government in the past three years (2017 – 2019).

Figure 20 plots rice imports of Mali, Burkina Faso, Ghana and Côte d’Ivoire over the period 2008 – 2018, alongside relevant country-level market and policy factors to illustrate their impact on rice import dynamics. Events include ad-hoc policy and regulatory shifts, variations in local production and investment, government-to-government agreements, changes in the political and security context, and food aid measures.

Figure 20. Selected rice policy events in the central trade basin, 2008 – 2018



Sources: FAOSTAT (2020) for imports from 2008 to 2017, ITC (2020) for 2018 imports; FAOSTAT for production events; FAO Commodity Policy Developments for trade policy events; USAID for food aid events; authors' own research for political and security context.

In 2011, Sahelian countries (Burkina Faso, Chad, Mali, Mauritania and Niger) **had a significant shortfall in cereal production** (25% lower than in 2010 and 2% below the five-year average), causing a gross cereal deficit estimated at 2,6 million t.⁹⁶ **Mali and Burkina Faso, in the central trade basin, were most affected**, while Mauritania, Niger and Chad had less severe deficits. That production shock led to a large rise in cereal prices (more than 50% above the five-year average)⁹⁷ and to deteriorating food security and nutrition conditions.⁹⁸ **To mitigate this cereal production shortfall and prevent prices in urban centres from rising too much, including for locally produced rice, the Malian government suspended rice import duties** (first, in July 2011; then from March to May 2012; and again from June to August 2012). **That, in turn, led to a steep rise in rice imports in 2012** (up to 420,000 t, the highest level in the decade analysed here). In addition, the government set ceilings on prices for imported rice at the wholesale level (330 CFA/kg, reduced to 315 CFA/kg in June 2012) and at the retail level (355 CFA/kg, reduced to 340 CFA/kg in June 2012). The Malian administration also implemented restrictions on the exportation and re-exportation of cereals (including rice).⁹⁹

Shortly after the onset of this food crisis, a security crisis broke out in Mali in January 2012, involving violent, armed conflict in the northern part of the country. Mass population displacements and the disruption of agricultural, pastoral and food trading activities ensued. Insecurity hampered the delivery of humanitarian assistance to northern regions already affected by the cereal production and market shock (CILSS, FAO, FEWS NET, WFP and ACF, 2012; OXFAM, ROPPA, RBM, APESS and WILDAF, 2012; ECHO, 2013).

In August 2012, the Ivorian government suspended import duties, other taxes and fees for imported rice for three months. The government also entered agreements with rice exporting countries to allow Ivorian importers to buy rice at preferential prices, notably with Thailand for the importation of 240,000 t of rice in July 2012.¹⁰⁰ **Data show an exceptional jump in Ivorian rice imports in 2012** (see Figure 20), which far surpassed the gap between domestic production and consumption needs. **Part of these imports was transhipped to Mali**, and possibly to other Sahelian countries having had a cereal production shortfall in 2011 (Burkina in particular).¹⁰¹ The coincidence of these measures in Côte d'Ivoire with the easing of import restrictions in Mali suggests an interaction between the policies of the Ivorian and Malian governments. Hypothetically, given the absence of a major cereal production shortfall in Côte d'Ivoire in 2011 and 2012, the Ivorian government would have taken those measures to enable domestic importers to take advantage of the market opportunities created by the relaxation of rice importation barriers in Mali.¹⁰² As a consequence, the temporary lifting of import duties in Côte d'Ivoire would have reinforced the Malian measures.

The trade measures taken by the Malian government in 2011 and 2012 contributed to an increase in rice imports, and these were probably reinforced by measures encouraging rice re-exportation from Côte d'Ivoire to Mali. Increased imports led to a stabilisation of prices (see, for instance, the wholesale price in Bamako in Figure 21).

⁹⁶ Uneven rainfall, combined with crop damage from birds, pests and locust attacks, were the main causes (ECHO, 2012; OXFAM, ROPPA, RBM, APESS and WILDAF, 2012).

⁹⁷ The magnitude of the increase in cereal prices in the Sahelian part of the basin was stronger than that observed in the East (Niger, Chad) and West (Senegal) basin, an unexpected phenomenon insofar as the central basin had, in previous years, been sheltered from the instability that characterized the evolution of the markets in neighbouring basins (CILSS, FAO, FEWS NET, WFP and ACF, 2012).

⁹⁸ It is estimated that, by early March 2012, around 7.8 million people in the region were in need of emergency food assistance and 1 million children under five would suffer from severe acute malnutrition. In May, the figure of food insecure was revised upwards to 17 million people, 8.1 millions of whom were facing severe food insecurity (ECHO 2012).

⁹⁹ In this case, permits for exportation were made available only on a case-by-case basis (OXFAM, ROPPA, RBM, APESS, WILDAF, 2012; ECHO, 2013)

¹⁰⁰ It also enacted ceiling prices for imported rice (297-447 CFA/kg, depending on rice varieties and origins) in April 2012.

¹⁰¹ Evidence of such transshipments is found comparing import data from different sources: according to FAOSTAT, Malian imports from Côte d'Ivoire reached a huge amount in 2012 (230,123 t), while in subsequent years they were almost negligible; ITC, on the other hand, records those flows as originating from Pakistan, India and Thailand. We were able to identify such evidence only in the case of Mali.

¹⁰² Considering the high level of concentration of the importation sector in Côte d'Ivoire, economic operators may have played a role in the decisions about those measures.

During this period, large inflows of imported rice probably also led to falls in the price of locally produced rice in Mali, as can be inferred in Figure 23. That has probably adversely affected domestic producers and distributors while benefiting consumers. **Price trends in the years following this crisis suggest that this episode has had lasting consequences for the domestic rice sector** (Figure 21, panel a). While the international price declined significantly over the period 2013 – 2015, the price of imported rice in Mali remained steady in the 300-350 CFA francs range. Already after the 2008 crisis, imported rice prices in Mali remained higher than in the previous years. That suggests that importers and distributors supplying overseas rice in the Malian market have been able to impose larger profit margins than before the 2011 – 2012 crisis, by gaining greater market power in a sector becoming more concentrated (unless their costs increased).

To further understand interlinkages among national import policies in the central trade basin, we consider **the case of Ghana that put in place a ban on rice imports through land borders in October 2013** (importation was then permitted only through the ports of Tema and Takoradi and through Kotoka International Airport in Accra).¹⁰³ Reportedly, a few large rice importers established in Ghana pushed for the ban as transshipments of low-cost rice through neighbouring countries (especially Côte d'Ivoire) competed with their trading activities.¹⁰⁴ **This policy change followed the reinstatement by the Malian government of regular import tariff and other taxes in June 2013, which led to a fall in rice imports back to pre-crisis levels. Around the same time, Ghanaian rice imports rose to 644,000 t in 2013, up from 400,000 t in 2012.**¹⁰⁵ The land import ban was lifted almost three years later, in July 2016, as the government allowed rice imports through a few crossings at the border with Côte d'Ivoire.¹⁰⁶ Meanwhile, between 2013 and 2015, Ghanaian imports were halved.

These developments involving Ghana appear to be closely related to those regarding Mali. After import protection in Mali returned to normal, it probably became more difficult for Ivorian traders to re-export rice to Mali, who might have built up their trading capabilities during the preceding years, in favourable circumstances for their business. Therefore they would have looked for alternative market opportunities, in particular in Ghana. Although Ghanaian rice imports rose in 2013, official data from either FAO or ITC do not capture any sizable re-exportation flows from Côte d'Ivoire to Ghana at that time. Yet, a recent report from ADERIZ indicates that a large share of Ivorian rice imports has become destined to be re-exported to neighbouring countries (Traoré, 2018). It is also possible that some rice has been transhipped unofficially to these countries. Another factor behind a possible surge in transshipments to Ghana is the progressive devaluation of the cedi starting in 2007, which would have made official imports through Ghanaian ports of entry more costly. **After the Ghanaian government lifted the ban on land imports in mid-2016, before the general elections in December 2016, import figures went up again.** Ghanaian imports continued to rise in the following years. Meanwhile, since 2013, Ivorian imports have been rising at a robust pace.

Price trends in Ghana reflect those trade developments (Figure 21, panel b). Wholesale prices for locally produced rice in Ghana, in both Accra and Bolgatanga (in northern Ghana), fell steeply between March 2013 and June 2014. The drop in prices was most likely linked to growing transshipments from Côte d'Ivoire, in part at least (rice production in 2013 was well above the five-year average). Thus, whereas the land import ban appears to have been effective at reducing inflows of overseas rice (at least based on official data), that measure has not succeeded in stabilising prices for locally produced rice and maintaining favourable market conditions for local producers. More than a year after the instatement of the ban, prices almost reverted to the levels of late 2012 – early 2013, but shortly after that, they were fluctuating and overall trending downwards again.

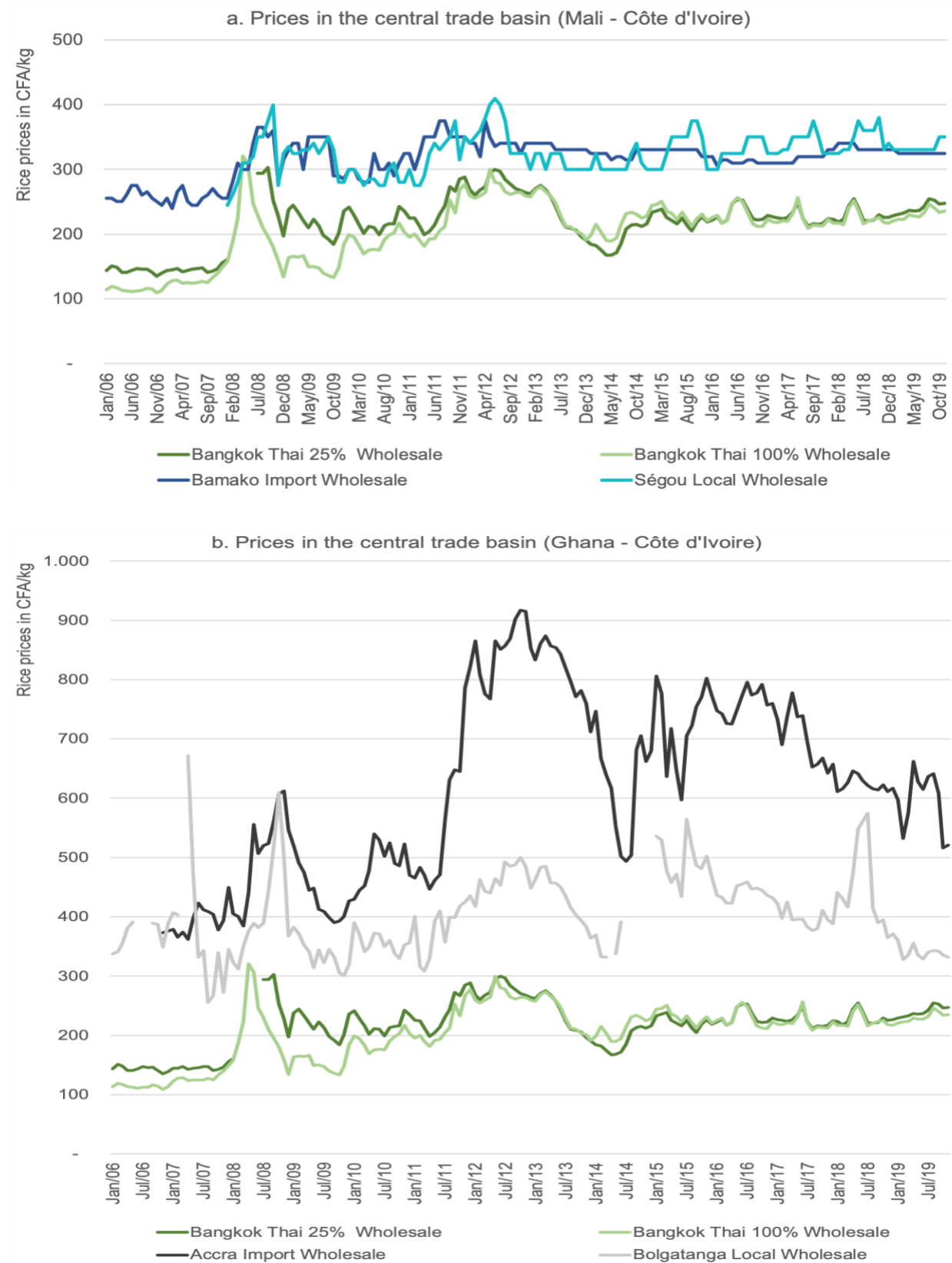
¹⁰³ In January 2014, the Ghanaian administration clarified that the restrictions could be eased only for importers that had made a commitment ahead of the ban's imposition.

¹⁰⁴ Pers. comm. with a representative of GRIB, April 2019.

¹⁰⁵ As previously observed, high incentives exist for transshipments due to lower import tariffs imposed in Côte d'Ivoire vis-à-vis Ghana. It is likely that re-exportation flows thus played a role also in previous years, in the surge in imports in Ghana in 2011, in spite of a significant production increase, and while Ivorian imports were fast rising.

¹⁰⁶ At the border towns of Elubo, Sampa and Nkrankwanta.

Figure 21. Comparison between international, imported and locally produced rice prices in the central trade basin, 2006 – 2019



Sources: World Bank (2019) for international rice prices and GIEWS (2019) for West African rice prices.

The third episode we consider comprises a number of market interventions taken by the Malian government between 2016 and 2019. **In 2016, the government declared its intent to strengthen the role of the national federation of rice producers (*Plateforme Nationale des Producteurs de Riz du Mali*, PNPR) in the implementation of institutional purchases.**¹⁰⁷ This move followed previous calls by Malian producer organisations and the PNPR, notably in 2014, to increase public procurement of locally produced rice under the authority of the CSA.¹⁰⁸ Following the 2011 – 2012 crisis, the replenishment of national public stocks offered an opportunity to support the development of the domestic rice sector. Several sources indicate that government actions in that area in 2014, and then again in 2016, led to positive outcomes for local producers, including increases in prices received by farmers, of nearly 15% in 2014 compared to 2013 and up to almost 25% in 2016 compared to the previous year (see Mees, 2015; Tjikan, 2017; and Mees, 2017).

However, whereas in 2014 and 2015 rice imports remained relatively stable, in 2016 they more than doubled, and in 2017 they continued to rise, despite above-average domestic production. Several factors probably contributed to this trend. In July 2015 the government **suspended import duties** on rice for three months, officially to ensure an adequate rice supply during the lean season. In May 2017, the government established **price ceilings** for several staple foods, including imported rice (330 CFA/kg and 350 CFA/kg for broken rice at the wholesale and retail levels), to ensure the affordability of those commodities during Ramadan. The price ceiling on rice would have had the effect of encouraging consumption and thus importation. In addition, **humanitarian assistance** to address chronically high acute food insecurity, notably during the pastoral and agro-pastoral lean season in 2016, and also the consequences of the security crisis, contributed to the rise in rice imports (WFP, 2017), possibly to the detriment of Malian rice.

The tension around the cost of imported rice remained palpable in the last years. In the context of social protests about the increasing cost of living in urban centres, the Malian government cut down the tax base for customs duties (the *mercuriale*) on 100% broken rice from 200,000 CFA/t to 100,000 CFA/t for the period March – September 2019. This measure was accompanied by the obligation for operators importing and distributing rice to ensure wholesale and retail prices of 300 and 350 CFA/kg, respectively. Data from FAO (until 2018) and USDA (until 2019) indicate that imports continued to grow rapidly in the past two years. Rice imports also show an upward trend in neighbouring countries in recent years (Burkina Faso, Ghana and Côte d'Ivoire).

The market and policy developments above suggest that the public procurement scheme was not effective at stemming the rise in rice imports and encouraging the supply of locally produced rice. For instance, in 2016 the OPAM was unable to sell more than 20,000 t of rice sourced from local producers due to the saturation of the domestic market by overseas rice imports (Tjikan, 2017; Soumbounou, 2019). Unsurprisingly, **rice producers organisations further pressed for changes in the rice import policy.** In 2017 the national federation, on the occasion of a regional conference organised with ROPPA and several NGOs,¹⁰⁹ urged the government to carry out a more coherent policy (Afrique Verte, 2017). It advocated to (a) allow imports on the basis of an accurate assessment of the gap between domestic production and consumption needs; (b) establish a scheme to couple purchases of locally produced rice with imports using certain quotas; (c) support the financing of local procurement by importers and timely payments to local producers; (d) improve the effectiveness and consistently give priority to purchases of locally produced rice by public actors. However, to this date, no evidence points to the implementation of such a policy package.

¹⁰⁷ The Islamic Development Bank contributed to the financing of this initiative.

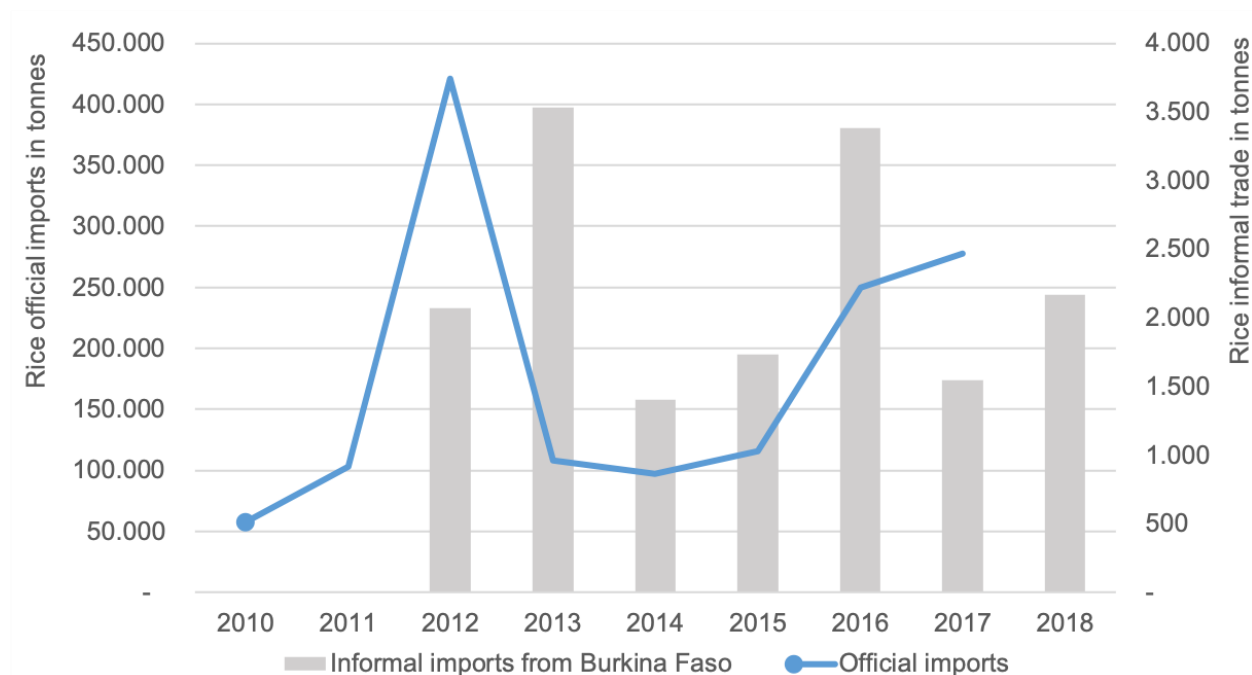
¹⁰⁸ For background information about the national federation of rice producers, see Delmas and Perrin (2008).

¹⁰⁹ Held in Bamako and organised by the partners of the project '*Organisations Paysannes comme acteurs clefs dans une bonne gouvernance des filières rizicoles au niveau national et régional en Afrique de l'Ouest*' (i.e. a consortium of NGOs (Rikolto, SOS Faim, GLOPOLIS, Afrique Verte Mali) and the framework for consultation of ROPPA rice producers (2014-17).

Those developments may reflect difficulties in expanding the supply of locally produced rice in consumer markets. Since 2009 locally grown rice prices have been slightly higher than those of imported rice. This situation has been accentuated since 2014, suggesting that the demand for locally produced rice in Mali has increased in recent years, although not as fast as the consumption of imported rice. Yet, **those government interventions may have contributed to the observed heightened volatility in locally produced rice prices after 2012**,¹¹⁰ while the gap with the imported rice price has widened in 2016 – 2018. As Figure 23 shows, after 2012, the price of locally produced rice remained at a level higher than in 2010—and well above the level before 2008—and it continued to rise, at a modest pace, even though rice production was expanding significantly.¹¹¹ **That may indicate a lack of improvement in the efficiency of rice production and marketing**, the rise in imports having possibly discouraged investments in farming, processing and storage capabilities, while unfavourable security conditions may also have adversely affected the rice supply.

We now examine the **interlinkages between the importation of overseas rice and the trading of locally produced rice** within this basin, in particular how the latter responds to shifts in import policy and regulation. We focus on the cross-border region comprising western Burkina Faso and eastern Mali region. In this case, we look at the movements in total official imports of Mali, which are essentially made of overseas rice, and the informal trade flows of locally produced rice from Burkina Faso to Mali (see Figure 22).

Figure 22. Comparison of total official imports of Mali with informal imports from Burkina Faso, 2010 – 2018



Sources: FAOSTAT (2020) for official imports, CILSS for informal trade (data collected in Bama and Banzon).

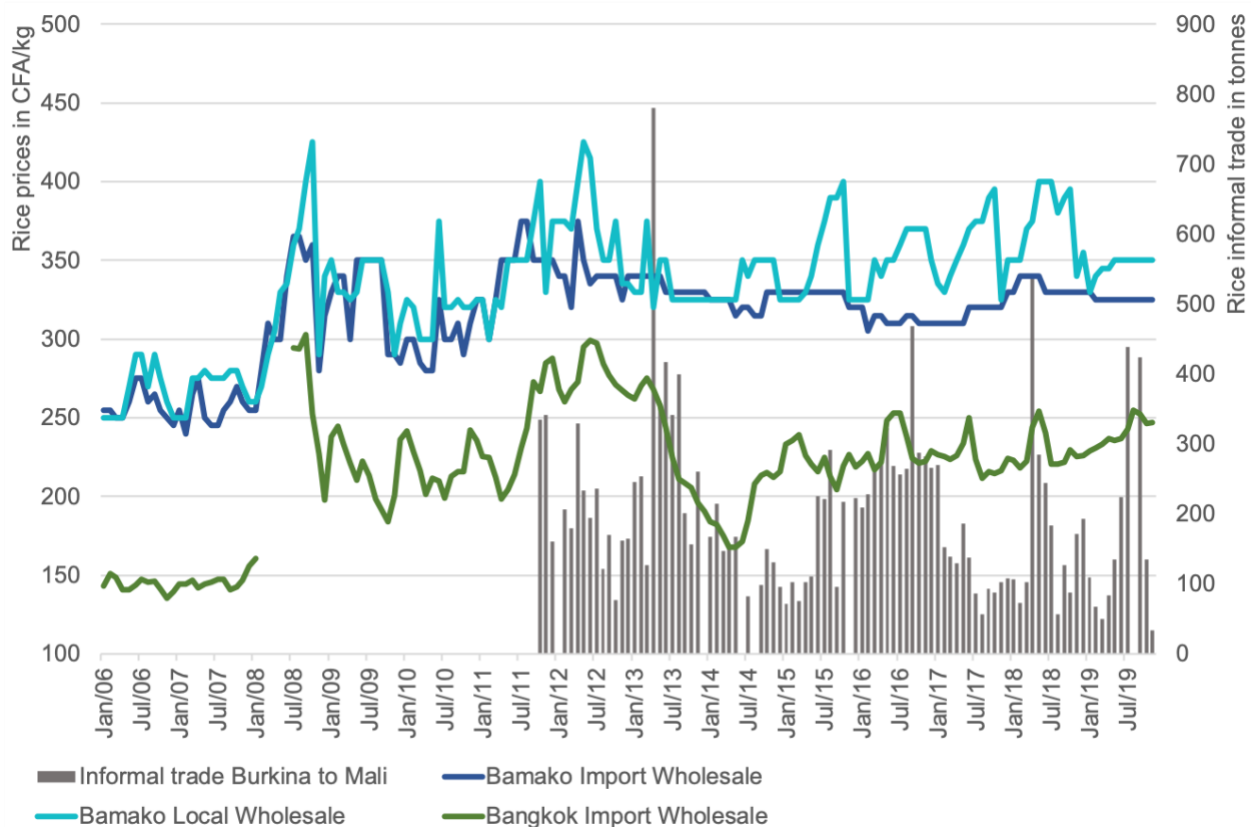
¹¹⁰ A number of spikes in the price of locally produced rice can be observed in recent years (namely in May – June 2014; June 2015; April – September 2016, May – June 2017 and April – May 2018) corresponding to spikes in the international rice price, while the imported rice price remains overall stable (e.g. regulated/fixed by price ceilings).

¹¹¹ The differential between the international and imported rice prices is smallest in Bamako compared to other reference markets in the region, although that differential grew in recent years.

Overseas rice imports and informal trade flows of Burkinabe rice move in opposite directions between 2012 and 2013, and between 2016 and 2017. After the Sahelian food crisis of 2012, overseas imports reverted to the levels seen in the 2000s as Mali reinstated import duties on rice, while informal trade flows from Burkina Faso rose sharply in 2013. Then, in 2017, as overseas imports continued to increase, informal trade flows receded. This suggests that extra-regional imports can displace intra-regional trade, or that intra-regional trade can respond positively to a decline in overseas imports. In contrast, between 2014 and 2016, extra- and intra-regional trade inflows increased at the same time. That was probably due to the easing of rice importation in 2015 and an increase in food assistance prompted by the escalation of the civil conflict in central Mali.

However, factors other than extra-regional imports have had an influence on intra-regional trade. For a more fine-grained analysis of those interlinkages, we look at trends in monthly data on rice prices and informal cross-border trade between Burkina Faso to Mali (see Figure 23).

Figure 23. Monthly rice prices and informal trade flows from Burkina Faso to Mali, 2006 – 2019



Sources: GIEWS (Malian wholesale prices), World Bank (Thai prices) and CILSS (informal trade).

As we saw before (see Figure 13), the **crop cycle** naturally has a strong influence on intra-annual trends in cross-border trade volumes, the availability of rice grown in western Burkina Faso being a major factor. Cross-border trade flows rise around April, as stocks amassed after the main harvest (October – December) are transferred to consumption markets, including across the border in Mali. A small bump in cross-border trade is observed around September, following the off-season harvest (June – July).¹¹² Figure 23 shows these two harvest periods in rice-producing areas in Burkina, as an approximate indicator of intra-annual export supply conditions. As international

¹¹² As discussed previously, significant price differentials existing across the border, with both wholesale and retail prices in Mali being consistently higher than those in Burkina, incentivise regional trade flows (Figure 13). This has been discussed in 3.3.2.

market conditions are another major factor to take into account in this analysis, Figure 23 also includes an international reference price (Thai 25% broken).

The first episode of interest here is again related to the Sahelian food crisis of 2012. In response to an unusually strong import demand in Mali, **in late 2011 the Burkinabe government enacted a ban on exports of rice and other cereals**. The ban remained in place throughout most of 2012.¹¹³ Although data show that the ban stopped official cereal exports from Burkina Faso to Mali, it apparently did not deter informal trade, at least in the first part of that period (banning exports has never been fully enforceable in the region). Informal imports to Mali from Burkina actually trended upwards between December 2011 and April 2012. Informal trade flows receded after April, but that is consistent with seasonal patterns. Observing the cross-border price differential (see Figure 14, in 3.3.2), we notice that, right after the establishment of the ban, prices in western Burkina Faso production areas (Bama) dropped and continued to decline throughout 2012, while prices increased quickly across the border, in Ségou. **This indicates that the impact of export restrictions was largely negative for local paddy growers and rice processors in western Burkina**. By losing market opportunities, they lost revenues and profits, which could have been invested in their operations. For instance, it was reported that a parboiling cooperative in Bama was unable to fulfil a contractual commitment to deliver rice to Malian buyers because of the export ban (USAID West Africa, 2013). Once the ban was lifted in 2013, informal trade flows increased even more, recording a significant spike between April and August (perhaps due to release of stocks from Burkina after the ban). In the meantime, the cross-border price gap narrowed with the price in Burkina quickly increasing in the first quarter of 2013.

When Mali suspended import duties in mid-2015, there was a rise in total official imports as well as in informal intra-regional imports (strong demand in Mali), which almost doubled between 2015 and 2016. Looking at price dynamics, we observe a spike in the price of locally produced rice in July 2015, which does not seem to be driven by international market dynamics. As a result, the cross-border price differential widens, indeed incentivising cross-border trade. Then, in May 2017 the Malian government established a price ceiling on imported rice, in the context of steadily rising international prices. As a result, the imported price in Bamako remained stable, while the price of locally produced rice increased. Overall cross-border trade, though, did not increase significantly (probably because the cross-border price margin had significantly narrowed thanks to steady increases in the Burkinabe prices—probably driven by a strong demand for locally produced rice in the domestic or possibly the Ghanaian market). However, in 2019, prices in Burkina declined, possibly due to the insecurity conditions in regions along the Malian border.

The analysis above provided evidence on the interactions between national rice trade policies in the central trade basin. It showed in particular the cross-border spillover effects of the policies of the biggest rice consumers and producers in the sub-region, namely **Côte d'Ivoire and Mali**. In particular, the 2013 – 2015 episode shows how **the Ghanaian government's attempt to protect and develop the domestic rice market** (e.g. through the imposition of higher tariff levels or ad-hoc restrictions) **was ultimately undermined by neighbouring countries' inconsistent rice trade regulations** and transshipments. Regional economic integration was also undermined.

¹¹³ Such restrictions aimed at reducing the increased outflows of cereals outside the country, so as to keep in check the rise in cereal prices. According to Burkinabe market operators, the rise in cereal prices was due to the fall in cereal production and the strong demand from neighbouring countries (Mali, Ghana and Nigeria), with an early presence of collectors from these countries on rural markets. Speculative trader behaviour, based on expectations of special purchases by the SONAGESS and other national agencies to replenish the reserves (operation Collection dans les Zones excédentaires, announced in November 2011), contributed to the steep rise in prices (CILSS, FAO, FEWS NET, WFP and ACF, 2012).

4.3. Eastern trade basin

4.3.1. Nigeria

Following the 2008 crisis, the Nigerian government formulated a series of policies aimed at boosting the productivity and output of the rice sector and eliminating Nigeria's structural deficit in rice.¹¹⁴ **In 2011, President Goodluck Jonathan launched the Rice Transformation Plan for the period 2011 – 15** aiming at: (i) doubling rice production, from 3.3 million to 6 million t per year; (ii) establishing networks of paddy producers around rice mills (under the Anchor Borrowers' Programme, essentially an out-grower scheme); and (iii) improving the cost-quality competitiveness of locally produced rice.¹¹⁵ **The government aimed to provide the private sector incentives to invest in large milling operations in rice-producing regions**¹¹⁶ through appropriate fiscal, investment promotions and infrastructure measures. These included tax breaks on imports of agricultural processing equipment, tax holidays for agro-processing investors located in the newly established Staple Crops Processing Zones, and investments in supporting infrastructure, especially roads, logistics, storage and power (Ayinde *et al.*, 2016; ADF, 2013). The Plan also comprised reforms to boost the availability of farm inputs, agricultural financing, and farm mechanisation.¹¹⁷ This strategy contributed to a modest increase in rice output in Nigeria, but it largely failed to attain the targets, with a widening gap between domestic demand and supply. **Its failure of these policies has been attributed to a lack of political support from the ruling coalition, weaknesses in the bureaucracy, and inadequate organisation among value chain actors** (Ayinde *et al.*, 2016).

Following the review of the Agricultural Transformation Agenda (ATA), **in June 2016, the administration of President Buhari—in office since 2015—formulated a new strategy, the Agriculture Promotion Policy (APP) Roadmap (2016 – 2020)**. The APP built on the ATA¹¹⁸ but focused on tackling two key issues facing Nigeria: the large food import bill (including for rice) and the low foreign exchange earnings from agricultural exports. For this purpose, the APP aimed to promote private sector investment in agriculture, while reforming the role of the Federal government vis-à-vis state-level authorities and the private sector.¹¹⁹ Rice was again selected among the priority crops for increasing production and reducing imports. **However, the APP suffered from the same lack of political support as previous agricultural policies** (Ibirogbu, 2018; Downie, 2017). Currently, Nigerian rice production still falls short of domestic

¹¹⁴ Previously, since the mid-1970s, several efforts had been made to develop the rice sector, with investments in large-scale irrigation projects in the states of Borno, Kano, Sokoto, and Bauchi. However, these initiatives failed to modernise peasant agriculture. Similarly, the Presidential Initiative on Rice, launched in 2003, and aimed at increasing production to 9 million tonnes of milled rice by the end of 2008, failed to attain its targets (Ayinde *et al.*, 2016).

¹¹⁵ The Rice Transformation Plan was embedded in the Agricultural Transformation Agenda (ATA, 2011-15). Compared to previous agricultural policies, which focused mostly on ensuring domestic food security through import substitution and foreign exchange conservation, the ATA's top priority was employment creation, particularly for the youth, to counteract increasing social discontent, instability and security threats. To maximise the employment potential of the agricultural sector, the value chain development approach was adopted, and Staple Crops Processing Zones (SCPZs) were established to attract private agribusinesses to set up food processing plants in areas with high food production (ADF, 2013; Ayinde *et al.*, 2016).

¹¹⁶ Rainfed and irrigated areas were targeted in the South, South-East and South-West (Ebony, Enugu, Bayelsa, Cross River, Ogun, Ekiti), as well as the West (Niger, Kwara), North-East (Taraba, Adamawa) and North-West (Kaduna, Kano, Kebbi, Sokoto).

¹¹⁷ Such reforms included: (i) the liberalisation of the seed sector with increased access to private actors, (ii) the elimination of distortions in fertiliser distribution with a greater presence of the private sector, (iii) state subsidy of fertiliser for small producers, (iv) the facilitation of access to land and financing to promote agribusiness and agricultural entrepreneurship.

¹¹⁸ The ATA achieved some positive results. Between 2011 and 2014, national food production grew by 21 million t and the food import bill fell from 3.2 trillion naira in 2011 to 635 billion naira in 2013 (The Guardian, 2016). The government was also able to rehabilitate irrigation canals and roads and some increases were recorded in the incomes of farmers and rural entrepreneurs, while several processing facilities became functional. However, the ATA employment creation and domestic food self-sufficiency targets remained largely unmet (Ayinde *et al.*, 2016).

¹¹⁹ With the APP, the government committed to give the private sector a leading role in the market while the public administration would focus on providing rural infrastructure, supporting market development, and delivering other public services. According to the Director of the Ministry of Agriculture and Rural development, the success of the APP depended on the engagement of market actors, farmers, states, investors, financial institutions, and communities (pers. comm., May 2019).

demand and most of the national territory has a deficit in rice (Libby, 2020).¹²⁰ Production growth has been achieved mostly through area expansion rather than yields improvements—while consumption per capita has been growing steadily (Ayinde *et al.*, 2016; Libby, 2020).

To limit the volume of imports and protect the domestic rice sector, the Nigerian government has placed high import tariffs on rice, although widely varying over time, usually ranging from 30 to 70%.¹²¹ Tariffs and other import restrictions were raised between the 2000s and the early 2010s,¹²² reaching their highest level, 110%, in 2013 (FFI and GAIN, 2016e; Gyimah-Brempong *et al.*, 2016).¹²³ The revenues accrued from the import tariffs were supposed to finance a rice sector development fund (Ayinde *et al.*, 2016). **Restrictions on access to foreign exchange is another way in which the Nigerian government limits imports.**¹²⁴ **The Nigerian government has also imposed non-tariff measures, notably periodic import bans limiting trade inflows across land borders,** especially to control rice re-exportation from Benin. Together those measures have been effective to a certain extent, reducing rice import flows through Nigerian ports. However, as already discussed (Section 3.2.3), less direct and more circuitous transshipment routes have kept imports high.

Moreover, the effectiveness of the tariff policy has been diminished by a high level of evasion by under-invoicing or the circumvention of customs procedures (Gyimah-Brempong *et al.*, 2016). An increasingly controversial aspect of the Nigerian trade policy is **the indiscriminate granting waivers of tariffs and other customs duties on imported rice and other commodities to certain economic operators under the directive of the Presidency and without public disclosure.**¹²⁵ This practice has become increasingly frequent under the civilian administration of President Obasanjo (1999 – 2007) and subsequent presidents—despite several formal promises to reduce abusive customs duty waivers. Both the Yar'Adua and Jonathan administrations continued this illegal practice.¹²⁶ **Such waivers are**

¹²⁰ 'While Buhari's spokesman, Garba Shehu, said the measures boosted rice production to 9.2 million tonnes last year (2019) from 7.2 million in 2015, making Nigeria more or less self-sufficient (...), agricultural data specialist Gro Intelligence put Nigeria's rice output at 4.9 million tonnes in 2019, up 60% from 2013 but well below local consumption of 7 million tonnes' (Libby, 2020).

¹²¹ Import tariffs on rice also vary with the degree of processing and are often lower for husked rice to support the domestic milling industry with additional supplies (Gyimah-Brempong *et al.*, 2016).

¹²² Until the early 1990s, Nigeria kept its import tariff on milled rice relatively low (20%). Such moderate tariff protection (from the 1970s through the 1990s) did not compensate for the macroeconomic bias against domestic rice production that occurred in periods of substantial appreciation of the real exchange rate. Starting in 1993, import tariffs were increased to reduce import volumes, which had been encouraged by the appreciation of the real exchange rate. Tariff rates were then kept at 100% from 1996 to 2007. Following the food price crisis in 2008, as in other West African countries, tariffs were suspended to prevent a surge in domestic prices (Gyimah-Brempong *et al.*, 2016).

¹²³ Between 2013 and 2014 several studies were conducted on the foreseen effects of the ECOWAS CET on agriculture in Nigeria. These studies showed that the CET would have led to (i) a decrease in rice production of 1.23% and the decline of employment in the agricultural sector in Nigeria, and (ii) an increase in the the volumes of rice imported from ECOWAS of 120% (Yerima and Beaujeu, 2014).

¹²⁴ Foreign exchange rationing was introduced in the 1980s through an import licensing system. Due to these restrictions, a parallel foreign exchange market emerged (with substantial premiums). Rice trade policy (in the form of import tariffs) has served to partially offset the effects of real exchange-rate appreciation in recent years. Since 1998, there is little evidence of rationing of foreign exchange, as parallel market rates have been close to official exchange rates (Gyimah-Brempong *et al.*, 2016). However, restrictions in the access to foreign exchange through the Central Bank were used again in 2015 to limit import volumes, alongside the introduction, on the interbank market, of a flexible exchange rate for the naira.

¹²⁵ Two main laws govern the approval of import duty waivers in Nigeria: the Customs and Excise Management Act Number 5 of 1958 (CAP 84 of 1990) and the Customs, Excise Tariff etc Consolidation Act Number 4 of 1995. According to these acts, although the Customs have the responsibility to control and manage the administration of the customs and collect the revenues from customs and duties, the President, on the advice of the Tariff Council, has powers to grant waivers. However, such powers are neither supposed to be granted indiscriminately nor without public disclosure through publication in a Government Gazette (Modebe *et al.*, 2014).

¹²⁶ For instance, in the run-up to elections in 2007, Nigeria lost over 380 billion Naira in import duties which were waived by the Federal Government (Modebe *et al.*, 2014). According to a declaration of the Chairman House Committee on Finance Abdulmumin Jibrin on July 19th 2012, 'documents submitted to his committee by the Federal Ministry of Finance, Federal Inland Revenue Service (FIRS) and the Nigeria Customs Service (NCS) indicate that the government was still granting import

largely granted as a means of political patronage, notably to finance the electoral campaigns of the ruling party and candidate “godfathers” who make donations to the party and politicians running for office (Modebe, Okoro, Okoyeuzu, and Uche, 2014). One of the main beneficiaries of customs duty waivers has been the billionaire businessman Aliko Dangote and his Dangote Group, a major importer of food products, including rice, and an important financial contributor to the party of former President Obasanjo. Informal customs duty waivers are sometimes used for products other than those they were initially granted for¹²⁷ or exchanged between importers (Modebe *et al.*, 2014). To address those abuses, the National Assembly has recently started a process to repeal the current Customs Act and strip the President of the powers to grant customs duty waivers, while giving more powers to the Customs Service. However, Modebe *et al.* (2014) point out that the problem does not lie with the existing laws, rather in their enforcement.

Frequent trade and macroeconomic policy shifts have caused wide rice price fluctuations in the Nigerian market, which have adversely affected the viability of rice farms and industrial processors and the investment climate in the sector (Gyimah-Brempong *et al.*, 2016). Small-scale farms and mills account for around 80% and 60% of rice output in Nigeria, respectively, with a handful of large companies (such as the Coscharis Group, Dangote Rice, Olam, and the Stallion Group) producing the rest. Despite the government's efforts to help farmers by providing grants and low interest loans, in most producing areas farmers grow rice without irrigation and little machinery, mainly using manual labour for harvesting (Jiang, Wang and Abadi, 2020). **Industrial milling capacity**—which has increased substantially after 2011, particularly in the northcentral and northwestern parts of the country¹²⁸—**is severely underutilised because of inadequate paddy production** (FFI and GAIN, 2016e).¹²⁹ Moreover, frequent power outages hinder the operation of processing machines (Akinyemi, 2019). The marketing of locally produced rice is constrained by **high internal transport costs**, especially from northern producing areas to southern urban centres (USDA, 2018). About 12% of the rice output is wasted due to poor harvesting, milling, storage and transport conditions (KPMG, 2019). **Overall, the rice value chain in Nigeria remains highly fragmented, with little organisation among farms, processing mills and market intermediaries** (Ayinde *et al.*, 2016).

Tax exemptions and other forms of incentives were put in place in 2014 to encourage private investment in rice production and processing. The tax measure distinguished between two types of rice importers: those operating one or several rice mills, or investing in new production capacity, who would incur a 20% levy on imports for a certain quota, in addition to the regular import tariff; and those only importing rice, who would be liable for a 60% levy. **This policy aimed to encourage importers to invest in the domestic rice value chain while limiting imports to the volume needed to close the gap between domestic production and consumption needs.**¹³⁰ This volume was to be determined by an inter-ministerial committee chaired by the Federal Ministry of Agriculture and Rural Development and whose members were drawn from the Federal Ministry of Finance, the Federal Ministry of Industry, Trade and Investment, and the National Planning Commission.

Both existing millers and new investors were eligible for the import quotas with the lower levy, but the requirement for a minimum investment of 10 million US dollars excluded most small millers while favouring large,

waivers to some few individuals to import such items despite policy stopping it’. He further asserted that detailed analysis of the documents showed that ‘*on the average, the government has granted minimum of N2 billion waivers per month from January to date to import rice, palm and vegetable oil’*, and that ‘*in the month of May 2012 alone, the government granted N39 billion waivers to some few individuals’* (Modebe *et al.*, 2014: 27).

¹²⁷ For instance, Sam Iwuajoku, owner of Unigate Investments and co-owner of Gibraltar-based Seaside View Management Limited, and a close associate of President Obasanjo, has recently been arrested in connection with an import duty waiver scam through which he imported three shipments of rice.

¹²⁸ The number of industrial rice mills rose from two to about twenty.

¹²⁹ Pers. comm. with a Nigerian expert, October 2019.

¹³⁰ Rice import quotas for small investors and pure traders were to be issued if the gap was 80 percent or more of the national consumption needs (Ayinde *et al.*, 2016).

well-connected rice importers as well as large corporations with little to no experience in the rice industry.¹³¹ Following an assessment of rice millers, importers and new investors, 26 companies were awarded rice import quotas. Among them, some large importers such as the Dangote Group and the Elephant Group met the requirements.¹³² The modalities of implementation of the policy raised concerns, especially among rice farmers and small, local millers. Not only large importers obtained a sizable tax advantage, but the implementation of the policy gave rise to some arbitrariness, particularly as some prospective investors did not make any significant investments in rice production but still received import quotas greater than investors already owning rice farms and mills.¹³³ Also, some importers sold the rights to use the quotas to other importers, and some exceeded their quotas, which led to a glut in the market and depressed paddy and rice prices and negatively affected small-scale producers having stocks to put on the market (Ayinde *et al.*, 2016; see declining price trends in 2014 – 15 in Figure 26).

The backward integration policy put in place under the ATA, and continued under the APP, has had very mixed results in terms of value chain development. With weak backing of the policy by the ruling coalition, the interests of importers largely prevailed over domestic sector development objectives. The policy was unevenly and inconsistently applied, which created uncertainty and an unfair playing field. The choice to open up the import quotas to new investors—which was to mitigate the resistance from some powerful actors who would have otherwise lost business under the new regime—ultimately undermined the effectiveness of the policy. In addition, **weak bureaucratic capacity and inter-sectoral coordination** (for instance with the Customs Service prioritising revenue targets over limits to the approved quotas, as requested by the inter-ministerial committee) **exposed the policy to abuses and hindered the regulatory role of the bureaucracy** (Ayinde *et al.*, 2016). **Fragmentation among rice value chain actors, despite a strong Rice Farmers Association of Nigeria (RIFAN), probably did not help the emergence of a coalition of actors to monitor and pressure the government into maintaining and enforcing the policy.**

4.3.2. Benin

The Government of Benin has long pursued rice self-sufficiency and deployed significant efforts to boost domestic production in the past few decades (Afouda, 2013; Balaro *et al.*, 2014).¹³⁴ Following the 2008 crisis, rice was selected as a priority value chain in the Strategic Plan for the Revival of the Agricultural Sector (PSRSA, 2009-15),¹³⁵ with a view at ensuring food security, gradually reducing the vulnerability to external shocks and limiting the outflows of foreign currency. The government also formulated a National Rice Production Development Strategy (SNDR) in

¹³¹ The other qualifying criteria to apply for the import quotas were: (i) being a Nigerian company and a member of a relevant trade association such as the Rice Processors' Association of Nigeria or the Rice Importers and Distributors' Association of Nigeria; (ii) being officially known to the Federal Ministry of Agriculture and Rural Development by having submitted a verifiable domestic rice production plan (Ayinde *et al.*, 2016).

¹³² The Dangote Group had acquired 150,000 hectares of rice fields in Edo, Kebbi, Jigawa, Niger and Kogi states to produce an estimated 1 million t of paddy per year, while the Elephant Group owned a 300 m US dollars mill processing 76,000 t of rice per year and a 10,000 hectare rice farm, both in Oyo state (Ayinde *et al.*, 2016).

¹³³ 'For instance, the Elephant Group and MIKAP Rice, whose investment plans were still on paper, were granted an import quota of 61,770 metric tonnes and 82,897 metric tonnes, respectively, while Ebony Agro and Stine Rice, both with running rice mills, got allocations of 15,000 metric tonnes and 30,000 metric tonnes, respectively, as existing millers but none as investors' (Ayinde *et al.*, 2016: 16).

¹³⁴ From independence to the present day, public policies in favour of the development of the rice sector in Benin have taken several forms, alternating forms of direct state intervention in the production and processing of rice (such as in the aftermath of independence—with the combined support of Chinese and Vietnamese cooperation—and in the wake of the 2008 crisis) and forms of disengagement (during the SAP-period, from 1995 to 2007; Balaro *et al.*, 2014).

¹³⁵ Benin's PSRSA emphasises the promotion of priority value chains for food security and trade. Rice was included due to its growing socio-economic and dietary importance in the country and the region (USDA, 2013). The Strategic Development Guidelines (2006 – 2011), and the Growth Strategy for Poverty Reduction (SCR, 2009 – 2011) constitute the PSRSA's references, which are in line with the development initiatives to which Benin adhered at the global and regional levels, including the Common Agricultural Policy of the WAEMU (PAC), the Agricultural Policy of the ECOWAS (ECOWAP) and the CAADP framework.

2010,¹³⁶ which marked a strong return of the state in the sector (Balaro *et al.*, 2014). Production incentives were scaled up, including through the provision of subsidised seeds and fertilisers, pumps for tube wells and other forms of project-based irrigation support (USDA, 2013). Price support measures—such as lowering import taxes, building up buffer stocks, and fixing prices—were also put in place (Balaro *et al.*, 2014).

Thanks to government efforts, Beninese production tripled in the last ten years, from 50,000 t in 2007 to 180,000 t in 2018—with rice output growing at a very fast pace (27%) in the first five years after the crisis (see Table 3). Yet, Benin remains a relatively small producer in the region (see Figure 4), and domestic supply has not been able to keep up with national consumption needs.¹³⁷ **Rice imports have continued to rise at a fast pace, particularly after 2015**—with an average annual growth rate of 41% between 2013 and 2017 (see Table 4)¹³⁸—**fuelling re-exportation to Nigeria and ultimately penalising the domestic rice sector**. More recently, the government formulated a new National Plan for Rice Crop Development (PNDF-Riz 2018 – 2021), which envisages a more significant role for public-private partnerships for investments in the rice sector (IFAD, 2018).

Import duties on rice in Benin are only 12.5% of the CIF value, including 10% for customs duties—in line with the ECOWAS/WAEMU CET. This represents between 17 and 40% of the costs paid by rice importers in Nigeria (depending on the prevailing tariff level in that country; USDA, 2013; FFI and GAIN, 2016a). Such a large difference in tariffs creates strong incentives for large volumes of rice to be smuggled from Benin to Nigeria, as this allows importers to avoid Nigeria’s high import duties and periodic bans on imported rice (see sections 3.2.3 and 4.3.1).

To carry out any import-export operation in Benin, including for rice, an economic operator must be registered at the Benin Chamber of Commerce and Industry and acquire a professional Importer Card. **Importer cards are issued, along with other business certificates, at the One-Stop-Shop for Business Formalisation**, GUFÉ (*Guichet Unique de Formalisation des Entreprises*) of the **Investment and Export Promotion Agency**, APIEx (*Agence de Promotion des Investissements et des Exportations*). Customs declarations are drawn up and duties are paid by approved customs brokers¹³⁹ through an information system called SYDONIA WORLD and with a Single Fee Schedule Payment system.¹⁴⁰ Differently from other imported products, no import authorisation must be requested by the operator prior importation. After entering the port, imported rice is subject to various documentary and physical checks carried out by customs, whether or not jointly with the port agents. For rice imported via land, the procedure is similar, but the broker must first obtain the customs value of the goods from an import verification program. The customs declaration is then based on such value. It has to be liquidated through the Single Fee Schedule Payment before customs carries out the last documentary and physical checks and authorises the product to be released for consumption on the Beninese territory.¹⁴¹

As for **phytosanitary rules, quality norms and food safety**, The Benin Food Safety Agency (*Agence Béninoise de la Sécurité Sanitaire des Aliments*, ABSSA) is in charge of national standards. However, the agency exercises **little**

¹³⁶ The stated objective of the Strategy—which has not been attained—was to increase paddy production from 72,960 t in 2007 to at least 385,000 t/yr in 2015.

¹³⁷ The demand for rice in the country, which has been constantly rising between 1990 and 2008, is estimated today at 42 kg/inhabitant/year. However, consumption may be overestimated due to cross border trade between Benin, Niger and Nigeria (USDA, 2013). According to MAEP data, local production covered only 47% of national needs in 2010, and 55% in 2016.

¹³⁸ Benin has one of the highest import dependency rates in the region (see Figure 6).

¹³⁹ The approved customs broker (*Commissionnaire Agréé en Douanes*, CAD) is first mandated by the economic operator to operate on his behalf.

¹⁴⁰ After the liquidation of the customs declaration, the *Guichet Unique Portuaire* generates a Single Fee Bill (*Bordereau de Frais Unique*, BFU) which traces all the fees due to the structures involved in the import process. This BFU will be paid in one of the two partner banks (Ecobank or BOA).

¹⁴¹ This information was retrieved through the Trade Portal Benin managed by APIEx and the Ministry of Industry and Trade (<https://tradeportal.bj/menu/1192?l=fr#>).

regulatory control over imported rice or domestically produced rice, besides collecting import duties (FFI and GAIN, 2016a).

The Beninese rice value chain is poorly efficient by regional standards: rice productivity remains low, meaning that output growth is mainly driven by the expansion of cultivated area with only a modest increase in yields; processing capacity is weak, both in terms of quality and quantity; and the marketing strategies are inefficient.

Urban distribution of domestically grown rice is very limited¹⁴² and mainly organised through a network of around 100 government stores (the *boutiques témoins*) operated by the state grain reserve agency, ONASA (*Office National d'Appui à la Sécurité Alimentaire*; FFI and GAIN, 2016a).¹⁴³ ONASA was entrusted by the government after the 2008 crisis with collecting the paddy directly from the producers, husking it and selling the milled rice at subsidised prices¹⁴⁴ (Balaro *et al.*, 2014; USDA, 2013). From 2011 onwards, SONAPRA (*Société Nationale pour la promotion agricole*) and ONASA split responsibilities, with SONAPRA being in charge of milling the paddy in its **two industrial units, in Malanville and Glazoué**, as part of its program to support local rice production through distribution of seed and fertiliser (Balaro *et al.*, 2014; FFI and GAIN, 2016a).¹⁴⁵

These mills, however, operate inefficiently, have poor extraction rates and lack procedures of proper rice separation and cleaning, resulting in low quality of domestically milled rice, which struggles to compete with imported rice. Moreover, private investment in industrial milling is constrained by a lack of paddy rice¹⁴⁶—given that almost all increases in paddy production supply the large demand from Nigerian mills, which pay higher prices¹⁴⁷—and by the relatively high price for paddy paid by SONAPRA¹⁴⁸ (FFI and GAIN, 2016a).

In 2016, the ONASA was dissolved and these two husking plants ceased their operations, causing severe disruption in the domestic rice marketing system. After several years of unsuccessful tenders for their acquisition, the formerly state-owned rice mills were finally privatised in 2019 and acquired by SOBETRI S.A. The company plans to renovate the mills and increase their production capacity up to 24,000 tonnes per plant per year. It also committed to building, within two years after the start-up date, two other paddy rice husking plants in the Ouémé valley for an additional investment of CFA 15 billion (Houngbadji, 2019).

¹⁴² Sales volumes of domestically grown rice are likely no more than 5% of all urban consumption. Outside of ONASA operated stores, availability of domestically grown rice is limited geographically to rural markets in rice production zones, whereas imported rice is readily available in traditional open-air markets (FFI and GAIN, 2016a).

¹⁴³ ONASA's focus is intervention buying, entering the market to stabilise prices when production is too high. It does not appear to hold large supplies of grain, reporting only a few thousand tons of cereals at any time (FFI and GAIN, 2016a).

¹⁴⁴ For instance, subsidised sales programmes for rice were launched in March 2012 and April 2013, whereby 3,000 t of domestically produced rice from public reserves was sold to vulnerable groups at the subsidised price of CFA 200/kg (FAO Commodity Policy Database).

¹⁴⁵ In addition to the state-led rice mills, some private structures are also involved in the processing and marketing of locally produced rice. This is the case, for example, of the Service Companies and Producer Organisations (*Entreprises de Services et Organisations des Producteurs*, ESOPs). Artisanal and semi-artisanal units also exist in certain localities transforming paddy into parboiled rice, individually or in associations (Balaro *et al.*, 2014).

¹⁴⁶ For instance, one of the major rice importers, Ste. Difezi et Fils Sarl (Difezi), reported plans of building its own rice mill in 2016. Before that, it had negotiated to lease one of the government mills, with plans to improve the equipment. However, it had to abandon the idea given the lack of paddy availability and the disincentives created by the government practices around subsidising rice sold through SONAPRA and ONASA (FFI and GAIN, 2016a).

¹⁴⁷ Many rice farmers (those with means to purchase inputs outside of the SONAPRA scheme) prefer to sell to Nigerian traders, even if at lower prices compared to the SONAPRA price, due to delayed payments on behalf of SONAPRA (SONAPRA has little working capital and must wait for ONASA to sell the rice through its retail depot network before it can pay the farmers; FFI and GAIN, 2016a).

¹⁴⁸ Farmers are often obligated to sell rice to SONAPRA after receiving subsidised fertiliser and seed on credit (FFI and GAIN, 2016a).

The government has also reportedly tried to **pressure importers to buy more locally produced rice** and invest in rice milling (Badarou, 2017). However, importers report that little surplus paddy is available for local milling given the large outflows of paddy exported to Nigeria (FFI and GAIN, 2016a).

At the same time, the government still makes **large institutional purchases of imported rice** to supply school and university canteens, vocational training centres, military barracks, hospitals and prisons. If the challenge of the reliability and quality of local supply is regarded as the main reason for this, other factors play a role. For instance, Beninese rice brands do not appear on the product purchasing guide that exists at the level of the Ministry of Commerce, making it difficult for local producer organisations to obtain contracts for institutional purchases. In addition, as the WFP supports financially and logistically the national school-feeding programme, only a short list of selected companies is invited to participate in rice tenders and—even though locally produced rice is generally cheaper—purchases of imported rice are preferred due to larger volumes available (Badarou, 2017; FFI and GAIN, 2016a).

Besides the inefficiency of the marketing system, **other policy-related challenges in the rice sector pertain to the input supply system**, which gives priority to cotton, resulting in a lack of specified rice fertiliser and the use of ill-suited cotton in rice fields, which reduces the quality of paddy.

The current status of the value chain in Benin suggests that, despite their success in intensifying and increasing production, **Beninese rice policies have hardly succeeded in setting up an efficient organisation of the sector, promoting effective management of rice mills, and adapting the quality of white rice to the preferences of urban consumers** (Balaro *et al.*, 2014).

4.3.3. Analysis of policy interactions in the eastern trade basin

Sections 4.3.1 and 4.3.2 analysed rice policies in Nigeria and Benin and highlighted the structural factors driving current import and intra-regional trade dynamics in the sub-region. In this section, we compare the trajectories of the rice sectors in these two countries and we look at the interaction between national policies and market outcomes in this basin.

In **Nigeria**, several public policies and public and private investments targeted the rice sector with the aim of boosting domestic production. Yet, **investments in milling operations were not matched by an adequate supply of locally produced rice**. This, in turn, has contributed to the **development of a cross-border dynamic in which paddy is exported from neighbouring Benin** (and Niger) into Nigeria to meet its growing industrial and consumer demand. Moreover, despite the relatively high import tariffs, the actual implementation of the tariff policy has been influenced by the interests of strong, politically connected importers, and tariff exemptions and waivers have been allowed on a significant scale. Smuggling of overseas rice into the country has also been substantial. Public supply-side policies in Nigeria have not been successful in decreasing the domestic structural deficit in rice, significantly reducing rice imports, or changing consumer preference for imported rice. They also did not succeed in breaking the dualism of the differentiated rice market into an import segment and a local production segment, nor in stimulating the development of the domestic market.

Benin, on the other hand, with a population of 11 million—that is only 5% of Nigeria’s—has become one of the biggest rice importers in the region with net imports growing at a very fast pace since the beginning of the 2000s. It **deliberately maintains low import barriers to facilitate entrepôt trade and take advantage of the market opportunities created by the rising demand for rice in Nigeria**. Benin thus serves as a trade hub—importing rice (and other goods) and re-exporting them, legally or, more often, illegally, to Nigeria (Golub, Mbaye and Golubski,

2019).¹⁴⁹ Three main factors fuel such re-exportation dynamics: (i) the divergence in trade policies between the two countries that creates arbitration opportunities for traders; (ii) high transport and logistics costs in Nigeria; and (iii) differences in monetary policies, which create further incentives for smuggling.^{150, 151}

We now turn to the analysis of national import policies and of their implications in countries other than those in which they are initially implemented and in the region as a whole. **We focus particularly on the evolution of the Nigerian trade policy in the post-2008 period, as changes in its tariff and non-tariff barriers are key determinants of rice trading dynamics in this basin:** first, the large increase in the Nigerian import tariff rates in 2012-13; second, the tariff reductions implemented in 2014; third, the restrictions on the foreign exchange market enacted in 2015; and fourth, the latest border closure enforced in late 2019.

Figure 24 plots rice imports of Nigeria, Benin, and Niger over the period 2008 – 2019,¹⁵² alongside relevant country-level market and policy factors to illustrate their impact on rice import dynamics. Events include ad-hoc policy and regulatory shifts, variations in local production and investment, government-to-government agreements, changes in the political and security context, and food aid measures.

¹⁴⁹ Benin's economy relies heavily on informal re-export and transit trade with Nigeria, which accounts for around 20% of its GDP. Benin's dependence on Nigeria is not apparent from official trade statistics (reported trade with Nigeria accounted for only about 6% of Benin's exports and 2% of Benin's imports in 2015-17) as these do not reflect the sizable informal trade flows along the border. World Bank estimates suggest that about 80% of imports into Benin are destined for Nigeria (Golub *et al.*, 2019).

¹⁵⁰ In particular, the restrictions on the supply of foreign currency, particularly dollars, and the wide gap between the official and black-market rates of the naira may encourage traders to buy in Benin by using the parallel foreign exchange market (Kpodji and Laga, 2012; Golub *et al.*, 2019).

¹⁵¹ Nigeria's heavy dependence on oil and several dysfunctional economic policies, along with Benin's poor business climate, have created an environment for informal cross-border trade to flourish. Besides import barriers, Nigeria's subsidised fuel prices, poor trade facilitation, the slow unloading operations at the port of Lagos, the insecurity (high cost of insurance) and the difficulties of access to foreign currency for Nigerian operators are other factors contributing to maintaining these trade flows. In addition, other commercial interests on both sides of the border should be taken into account: for instance, the sale of rice is often coupled with the purchase of manufactured products from Nigeria (Kpodji and Laga, 2012).

¹⁵² Given the uncertainty surrounding Nigerian import data, we plotted both FAOSTAT and USDA data in the case of Nigeria. The two series show similar trends but display large differences in terms of volumes reported, with the gap widening since 2015.

Figure 24. Selected rice policy events in the eastern trade basin, 2008 – 2019



Sources: FAOSTAT (2020) for imports from 2008 to 2017 and ITC (2020) for 2018-19 imports (solid lines); *USDA (2020) for Nigerian imports 2008 – 2019 (dotted line); FAOSTAT for production events; FAO Commodity Policy Developments for trade policy events; authors' own research for political and security context.

In the second half of 2012, Nigeria substantially increased its import tariff, previously averaging between 5 and 20% depending on the type of rice considered. The new tariff rates were introduced to spur domestic production (in the framework of the Rice Transformation Agenda) and limit the volume of imports, which had doubled in the previous three years, reaching almost 2.2 million t in 2011 (see Figure 24). The new rates were set at 30% (5% levy on top of a 25% import duty) for husked rice and 50% (40% levy and 10% import duty) for milled/semi-milled rice, and they were further **raised to 110%** for both types of rice **in January 2013**. This major rise in tariffs led to a decline in official import volumes. However, it also largely encouraged tariff evasion,¹⁵³ leading to an **increase in unofficial transshipments over land**, with most rice flowing from Benin through Niger and into Nigeria (Gyimah-Brempong *et al.*, 2016; USDA, 2013; Ships and Ports, 2014). Reports of increased re-exportation flows seem to be confirmed by the large jump in Beninese imports in 2013, which reached a volume of almost 1.4 million t, double the average of the 2008-12 period.¹⁵⁴ This led the Nigerian government **in May 2013**—just a few months after the introduction of the new tariffs—to **enact a ban on land imports, which was officially lifted two and a half years later, in October 2015**.¹⁵⁵

Then, recognising that the increase in import levies was fuelling smuggling via Benin, **the Nigerian Minister of Finance revised the tariff policy in July 2014, reducing import levies on all imported rice to 60%** (on top of a 10% import duty). Lobbying from the Rice Importers and Distributors Association of Nigeria (RIDAN) may be one of the driving forces behind the import policy revision (Ships and Ports, 2014). With the new trade policy, the government also granted **tax exemptions** in the form of a much lower levy (20%) for importers owning rice processing facilities and operating verifiable backward integration programmes in the country, intending to promote strategic investment into the domestic rice sector (CTA, 2014; Premium Times, 2014). The reduction in tariffs was followed by a significant decline in Nigerian imports between 2014 and 2015 (import volumes halved according to FAO data). Beninese imports also declined in those years, probably as a result of the increased difficulty for Beninese traders to re-export rice to Nigeria due to the enforcement of the ban.

In June 2015, following the election of President Buhari, with its promise to invest in the diversification of the country's economic base—including through investments in agriculture and the rice sector—the **Nigerian Central Bank barred importers from accessing foreign exchange to pay for rice imports**.¹⁵⁶ Evidence on the impact of the restrictive measure is mixed, as FAO trade data report a dramatic drop in Nigerian imports between 2015 and 2016—from 786.000 t to 90.000—while USDA estimates that imports remained high over the period 2014 – 2017, averaging around 2.8 million t, four times the FAO average for the same period. Beninese import volumes, on the other hand, were increasing in 2015, doubled in 2016 and continued to rise in 2017 (up to almost 2 million t, a level far too large to be explained by domestic demand¹⁵⁷). This suggests that **transshipments may have increased substantially in**

¹⁵³ This is suggested by the widening gap between the volume of rice exports to Nigeria reported by international databases (e.g. COMTRADE) and the low level of imports declared by the Nigerian customs (Gyimah-Brempong *et al.*, 2016). Increased tariff evasion in 2013, resulting in a sheer reduction of revenue for the Nigerian customs, was also reported by the Nigerian maritime site Ships and Ports (Ships and Ports, 2014).

¹⁵⁴ Rice imports in Benin remained high also in 2014—despite an upward trend in average imported rice prices in the country (which grew from CFA 237,210 in 2010 to CFA 360,488 in 2014, an average increase of 52% over the period, according to available data from the National Institute of Statistics and Economic Analysis, INSAE). This implies an increase in outflows of foreign currency from an average total cost of CFA 160 billion in 2010 to CFA 504 billion in 2014.

¹⁵⁵ With Nigeria lifting the ban in October 2015, the southern border between Cotonou, in Benin, and Lagos, in Nigeria, was reopened to rice imports in November of the same year, after the introduction of lower-cost fees at border crossings with Nigeria.

¹⁵⁶ It also backed loans of at least 40 billion naira (130 m US dollars) to help smallholders boost output (Libby, 2020) and introduced a flexible exchange rate of the naira (FAO Commodity Policy database).

¹⁵⁷ Benin imports average 600,000 t/yr of rice or more. With a population of 8.6 million in 2009, and assuming per capita consumption of 30 to 35 kg/capita/year (FAO Food Balance Sheets report 34.4 kg/capita/year), Benin's total rice consumption would be 258,000 – 301,000 t. Given domestic net production of 100,000 t and imports of 897,000 tons (COMTRADE) in 2009 (based on the figures of exports to Benin, rather than imports by Benin), consumption of imports would be 158,000 – 201,000 t, leaving 696,000 – 739,000 t to be re-exported (Gyimah-Brempong *et al.*, 2016).

those years, despite Nigerian attempts to curb smuggling with subsequent bans over land (in March 2016 and April 2017) and adjustments in its tariff level (which was further reduced to 50% in December 2016¹⁵⁸).

In August last year, President Buhari went a step further in the fight against smugglers and **enforced a partial closure of borders with Benin, then extended to borders with Niger**.¹⁵⁹ The border closure, which came two months after Benin and Nigeria signed a continental agreement to liberalise the movement of goods and services,¹⁶⁰ effectively banned trade on all goods for an indefinite period—officially, until Nigeria’s neighbours take ‘strict and comprehensive measures’ to tackle smuggling (Signé and van der Ven, 2019; Ibukun, Olurounbi and Ahissou, 2019). According to some observers, the President’s decision to pursue this crackdown against rice smugglers was driven by political considerations, mainly to compensate rice farmers in the northern constituencies, who had voted for Buhari when he was re-elected that year. However, pressures from the Nigerian business community (notably, Aliko Dangote)—complaining about over-taxation of their trucks at the border-crossing with Benin and other limitations to trade imposed by the neighbour—may be another reason for Buhari’s firm move (Niba, 2019; Duhem, 2019). Due to the high uncertainty in the trade data, it is difficult to infer the impact of the recent measure on Nigerian rice imports: while FAO and ITC trade data indicate a steep decrease, the USDA estimates a more realistic level of imports comprised between 1.9 and 1.5 million t in 2018 and 2019. USDA also forecasts Nigeria’s rice imports to rise to 2.4 million t in 2020, partially due to the high cost of unprocessed Nigerian paddy and the elevated operating costs at mills (Libby, 2020). The supply gap created by the closure has resulted in **skyrocketing prices of rice in Nigerian markets** (see Figure 26),¹⁶¹ which favoured local farmers and processors (Niba, 2019; Jiang, Wang and Abadi, 2020). However, without significant investment in machinery or irrigation, Nigerian producers will struggle to meet the increased demand and fear that this strategy may backlash in the long-term, as rice will no longer be affordable for most Nigerians (Jiang, Wang and Abadi, 2020; Libby, 2020). On the other hand, Nigerian tax revenues seem to have gone up since the border was shut, as cargos destined for Benin are now being delivered at Nigerian ports (Orjinmo, 2019). **More broadly, the border closure, challenging the free movement of goods between ECOWAS countries, has been highly disruptive for local industries, destabilising neighbouring economies**. As Benin is a key transit route for imports destined to landlocked neighbours, its impact has been felt across the whole West African region, making it difficult for factories and traders to import key raw materials and export their products (Ibukun, Olurounbi and Ahissou, 2019).

Price trends in Nigeria partly reflect the uncertain movements of its trade policy, with the price of locally produced rice generally responding to increases in the price of imported rice originating from increased tariffs and other non-tariff measures (see Figure 26). This is the case, for instance, in 2014, when a decline in imported rice prices—resulting from lowered tariff rates—led to a decrease in wholesale prices of locally produced rice.¹⁶² Similarly, in March 2016, when the Nigerian government reintroduced a ban over land imports restrictions, a steep increase in the price of imported rice can be noticed (it peaked at 779 CFA/kg in May 2016), which was followed by an increase in the price of locally produced rice. The price transmission mechanism, however, seems to be only partial and non-

¹⁵⁸ The levy for importers investing in the domestic rice sector remained at 20%.

¹⁵⁹ The border closure was enforced through a joint security operation between the Nigeria Customs Service, the Nigeria Immigration Service, the Armed Forces of Nigeria and other entities. Following Nigeria’s decision, Benin and Niger instructed customs brokers and other operators to refrain from issuing transit or re-export declarations for white and parboiled rice destined for Nigeria.

¹⁶⁰ The African Continental Free Trade Area (AfCFTA), which aims at greater economic integration through the removal of trade barriers and tariffs on 90% of commodities, was signed in July 2019.

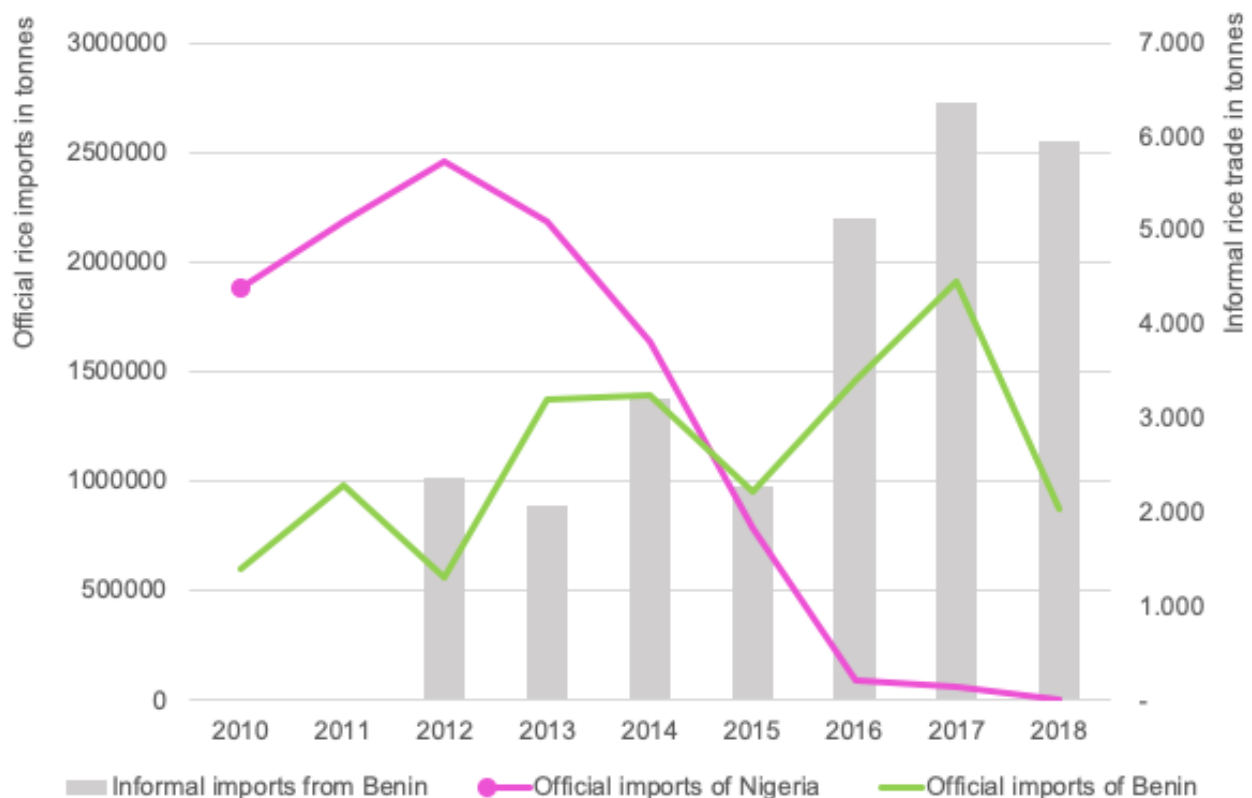
¹⁶¹ According to Todowede Baba Oja, director of the popular Badagry market on the Nigeria-Benin border, the cost of a 50 kg bag of rice, which used to cost 9,000 naira, before the border was shut, has doubled, reaching 22,000 naira in September 2019—higher than Nigeria’s minimum monthly wage of 18,000 naira (Niba, 2019).

¹⁶² We lack data on the price of locally produced rice to analyse the impact of the 2012-13 tariff increase on the domestic market. However, we do notice a substantial increase in the level of the imported rice price stemming from increased tariffs (while the international price of rice shows a decreasing trend).

instantaneous. This is because of the adjustment time required for value chain actors to integrate changes in tariff and non-tariff policies into their microeconomic decisions, thereby adjusting their profit margins to determine selling prices and refining rice trade strategies (including cross-border trade). In addition, the high levels of tariff evasion may be part of the reason why tariff increases did not result in sustained increases in prices of locally produced rice (Gyimah-Brempong *et al.*, 2016).¹⁶³ Starting from February 2017, the price of locally produced rice dropped back to pre-2015 levels, following a decline in imported rice prices. **This suggests that domestic value chain actors were unable to capitalize on the favourable market conditions of previous years, e.g. investing in increased efficiency of rice production and marketing systems.** Finally, as discussed, last year's border closure significantly impacted the market, putting a strong upward pressure on prices.

We now examine the interlinkages between the importation of overseas rice and the trading of locally produced rice within this region, in particular how the latter responds to shifts in the Nigerian import policy and regulation. We focus on the cross-border region comprising northeastern Benin and northwestern Nigeria (see Figure 16 in section 3.3.5). In doing so, we look at movement in informal trade flows of locally produced rice (exported from Benin to Nigeria) in relation to trends in total official imports of Nigeria as well as movements in Beninese imports—given the importance of rice transshipments in this basin (see Figure 25).

Figure 25. Comparison of total official imports of Nigeria and Benin with informal imports from Benin to Nigeria, 2010 – 2018



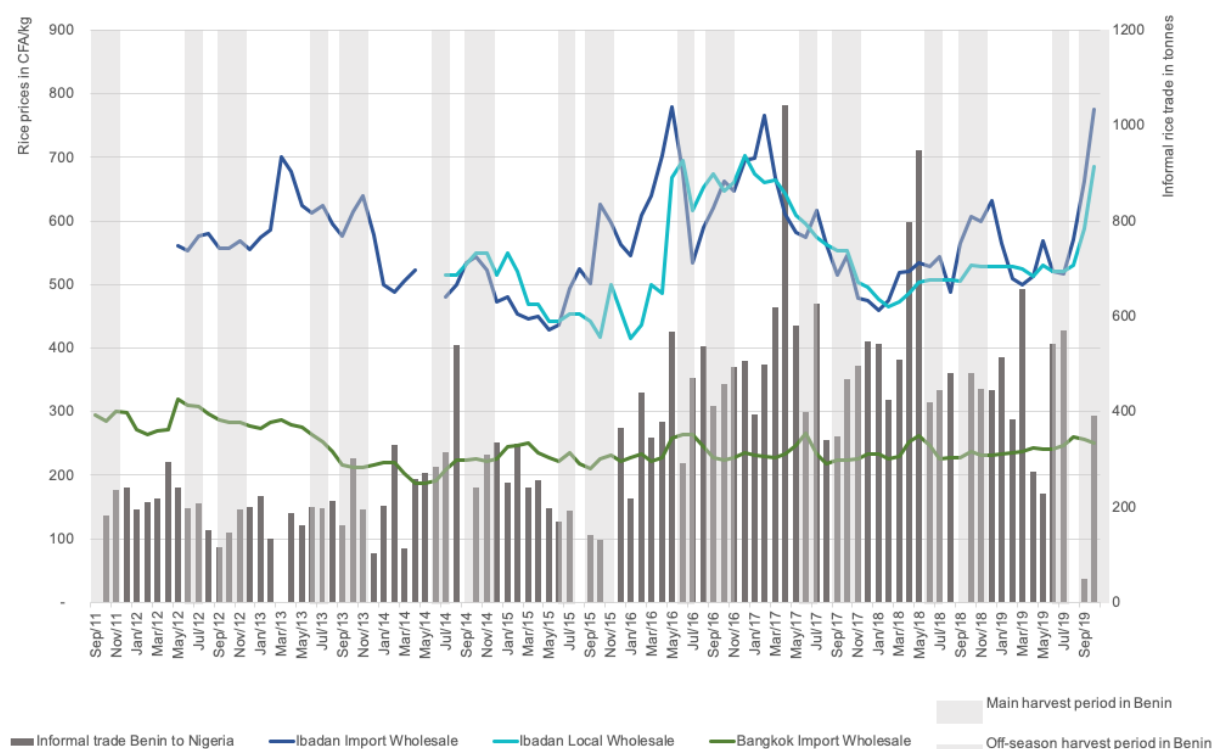
Sources: FAOSTAT (2020) for official imports and CILSS for informal trade (data collected in Bagou, Bante, Dassa, Glazoué, Gogounou, Malanville, Ouesse, Péhunko, Savalou and Save).

¹⁶³ Nonetheless, the domestic market price of imported rice is substantially higher than the import parity price without tariff, suggesting that tariffs and costs related to tariff evasion (bribes, etc.) substantially raise prices for consumers (Gyimah-Brempong *et al.*, 2016).

Overseas rice imports in Benin and informal trade flows of Beninese rice move in the same direction in most years, except for 2012-13 when informal trade flows receded while Beninese imports rose sharply, probably to take advantage of the steep increase in Nigerian tariffs (through increased re-exportation). Starting from 2015 onwards, when Nigerian imports rock bottom (at least, according to FAO trade data) and Beninese imports rise at a faster pace, informal trade flows also increase, reaching their highest level in 2017. Between 2017 and 2018, both Beninese imports and informal trade decline, but imports decrease to a larger extent. **The correlation between extra-regional imports and intra-regional trade may suggest that changes in Nigerian trade policies (e.g. particularly its border control) impact both types of trade in a similar way.** This is likely the case for border closures, as quantitative restrictions of this type tend to affect indiscriminately trade in overseas rice as well as informal flows of locally produced rice.

However, factors other than extra-regional imports have influenced intra-regional trade. For a more fine-grained analysis of those interlinkages, we look at trends in monthly data on rice prices in Nigeria and informal cross-border trade from Benin to Nigeria (see Figure 26).

Figure 26. Monthly rice prices and informal trade flows from Benin to Nigeria, 2011 – 2019



Sources: GIEWS (Nigerian wholesale prices), World Bank (Thai prices) and CILSS (informal trade).

As we saw before (see Figure 18), the **crop cycle** naturally has a strong influence on intra-annual trends in cross-border trade volumes, the availability of rice grown in northeastern Benin being a major factor. Cross-border trade flows rise around April, as stocks amassed after the main harvest (September – December) are transferred to consumption markets, including across the border in Nigeria. A small bump in cross-border trade is observed around August, following the off-season harvest (April – June).¹⁶⁴ Figure 26 shows these two harvest periods in rice-producing areas in Benin, as an approximate indicator of intra-annual export supply conditions. As international

¹⁶⁴ Significant price differentials existing across the border, with both wholesale and retail prices in Nigeria being consistently higher than those in Benin, incentivise regional trade flows (Figure 19). This has been discussed in 3.3.5.

market conditions are another major factor to take into account in this analysis, Figure 26 also includes an international reference price (Thai 25% broken).

An episode of interest here is linked to the **ban on land imports implemented in Nigeria in early 2016**. As discussed before, this measure—alongside stronger controls on foreign exchange—affected overseas imports in Nigeria and fuelled increased smuggling from Benin. As a result of the increased scarcity on the Nigerian markets, the price of rice in Nigeria (both imported and locally produced) quickly rose.¹⁶⁵ At the same time, it became more difficult to export locally produced rice from Benin, due to the introduction of the ban. **This, combined with the impact of increased importation in Benin, depressed Beninese rice prices** (see Figure 19). It is likely that the widening cross-border price gap raised incentives for informal exports of Beninese paddy to Nigeria, where the demand for rice was high—probably as a result of several investments in rice mills in western Nigeria. Cross-border trade flows in locally produced rice, in fact, intensified starting in 2016 (see Figure 25). **This market situation (low consumer market prices and limited paddy availability) probably exacerbated the economic difficulties of the two Beninese parastatal rice mills, accelerating their shutdown** (see also section 3.3.5). **Since then, cross-border trade in locally produced rice has grown, and a large share of the Beninese paddy crop and parboiled rice output has been exported to Nigeria.**

Similarly, last year's border closure heavily disrupted cross-border trade in locally produced rice: already in March 2019, when the Nigerian administration started tightening border controls, the wholesale price of Beninese rice dramatically dropped (Figure 19) and informal trade flows ceased in August 2019, when the border closure was enforced. In the meantime, as we discussed, prices in Nigeria were increasing rapidly. However, some informal flows recovered a few months later, in October that year (see Figure 26).

This section analysed the interactions between national rice trade policies in the eastern trade basin. It showed, in particular, **the distortionary effects created by Nigerian trade policies on the geography of cross-border exchanges in this basin, which ultimately undermine national efforts to strengthen the domestic rice value chain and reinforce the position of powerful actors**. The lack of a coordinated approach towards regional economic integration is highlighted.

5. Cross-country insights and synthesis

This section synthesises the analyses conducted above on the drivers of rice trade, its interactions with the development of domestic value chains, and the role of cross-border trade in the West African countries and sub-regional basins covered by this study. It looks at patterns in the effects of rice policies directed at the sector and highlights how rice trading systems contribute to determining key policy decisions. It begins with a characterisation of the core policy problem in the rice sector across countries (5.1). It then brings together insights from the different countries and trade basins regarding extra-regional trade (5.2), the organisation of the domestic sector (5.3), and intra-regional trade (5.4). **Figure 1, which was presented in the introductory section, represents, in a simplified manner, the causal mechanisms explained in this synthesis.**

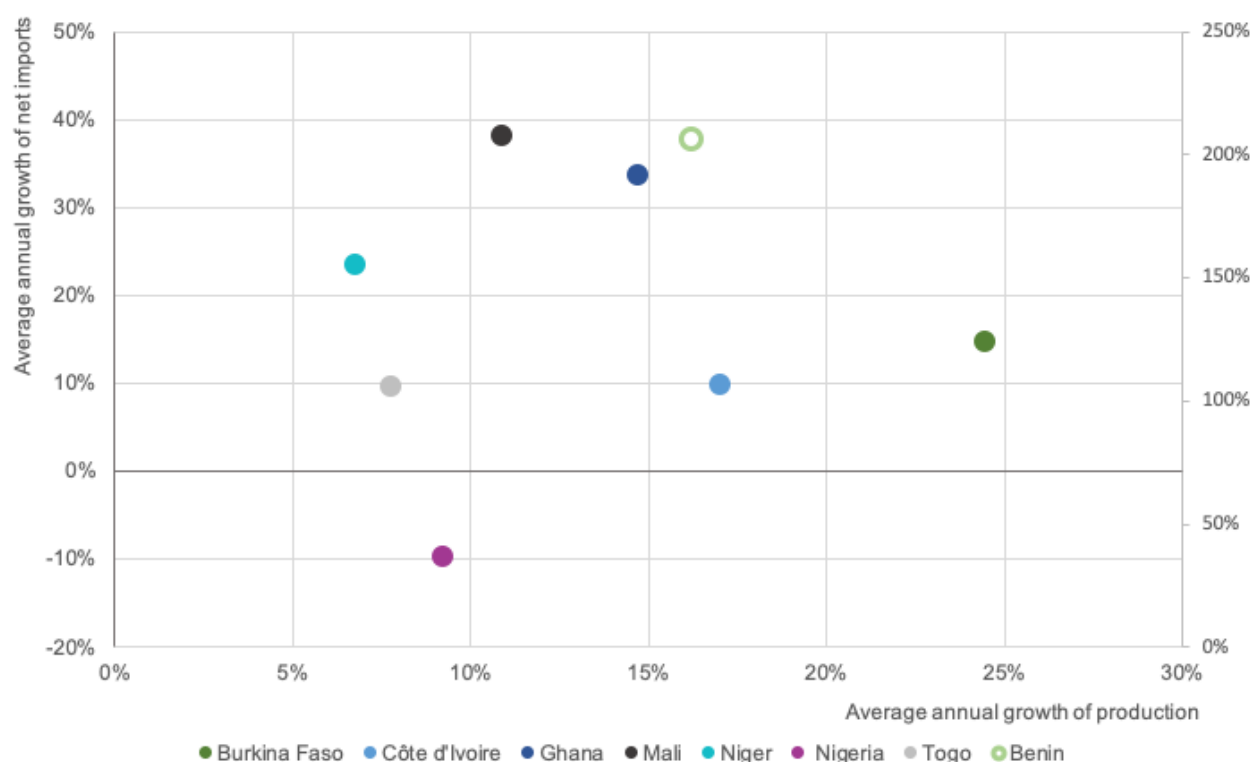
¹⁶⁵ The price increase in Nigeria is not driven by an increase in the international price.

5.1. Low competitiveness and high import dependency as central issues

Although the rice sector in West African countries is complex, central to this problem is the relatively **low competitiveness** of the sector, which, in combination with the rapidly growing consumer demand, contributes to a **high, excessive dependency on extra-regional rice imports** (see Figure 1).

A notable feature of post-2008 trade developments is the continued rise in overseas rice imports, despite relatively high prices and growing paddy and processed rice output. Figure 27 shows annual output growth and net import growth in eight countries over the period 2008 – 2017. Although there are too few data to draw any statistical conclusions, they show a **modest pattern of negative correlation between imports and production**, especially when excluding Benin. Except for Côte d'Ivoire, Nigeria¹⁶⁶ and Togo, **import growth figures were relatively high in that period**. The cases of Ghana and Mali are noteworthy in that respect: despite robust output growth, these two countries also saw their net imports rising at a fast clip during the decade following the 2008 crisis. The case of Burkina Faso presents similar characteristics, although it had a much higher output growth in the years following the 2008 crisis (even though output growth subsequently faltered in the period 2013 – 2017). Benin appears to be an outlier, but it must be borne in mind that Benin import growth figures are manifestly distorted by the import shipments that are re-exported, legally or not, to Nigeria.

Figure 27. Average annual growth of imports in relation to average annual growth of production, 2008 – 2017



Sources: FAOSTAT (2020) for production data from 2008 to 2012 and USDA (2020) for production data from 2013 to 2017 (except for Niger in 2008 and 2017) and FAOSTAT (2020) for net import data.
Benin on the right axis.

¹⁶⁶ In the case of Nigeria, it must be borne in mind that import figures in recent years present high uncertainty, as mentioned earlier.

Overall it appears that this group of West African countries shifted to a new market equilibrium, with higher imports as well as production. The latter, as we saw earlier, came at the cost of sizable public expenditures on input subsidies and irrigation schemes. **This pattern results largely from national rice policies that have facilitated the importation of overseas rice, and too often failed to support private investment in productivity- and quality-enhancing technologies in the processing and distribution of locally produced rice and to put in place frameworks conducive to such investments.** As Figure 10 shows, trends in differentials between the prices of locally produced rice and those of imported rice suggest that the competitiveness of the West African sector has not progressed much. For Ghana, the price differential in favour of locally produced rice declined between 2013 and 2019; for Mali, it declined and became negative; and it also slightly decreased for Côte d'Ivoire. Only in Nigeria, since 2015, the price differential has evolved favourably for the rice produced locally.

A multitude of factors has to be taken into account to understand the problem of the rice sector, particularly the steady rise in per capita consumption and total consumption (the latter being also due to population growth and urbanisation). **Besides the competitiveness problem, rapidly rising consumption is the other major driver of West Africa's excessive rice import dependency,** although it was not the focus of this study. Also, at the same time as governments ramped up support for farm-level rice production, policy-makers largely neglected the potentially beneficial effects of cross-border trade in providing market opportunities for domestic producers. All those factors have determined the competitiveness of West African rice, defined in terms of cost and quality, relative to that of the rice imported from Asia and other major producers.

The consequences of **import dependency** entail **multiple risks**. It entails greater **exposure to international market shocks**, which in turn can lead to food insecurity and social instability when international prices suddenly rise, or to revenue and profit losses incurred by domestic producers when they drop relative to the prices of domestically produced rice (see Figure 10). That reinforces the logic of facilitating overseas imports. It also implies **macroeconomic risks**, by draining foreign exchange reserves and thus affecting other sectors relying on imports of inputs and other essential goods and services. All of that makes the "rice problem" a difficult equation to solve.

5.2. Effectiveness of rice trade policy

5.2.1. Tariff and non-tariff measures

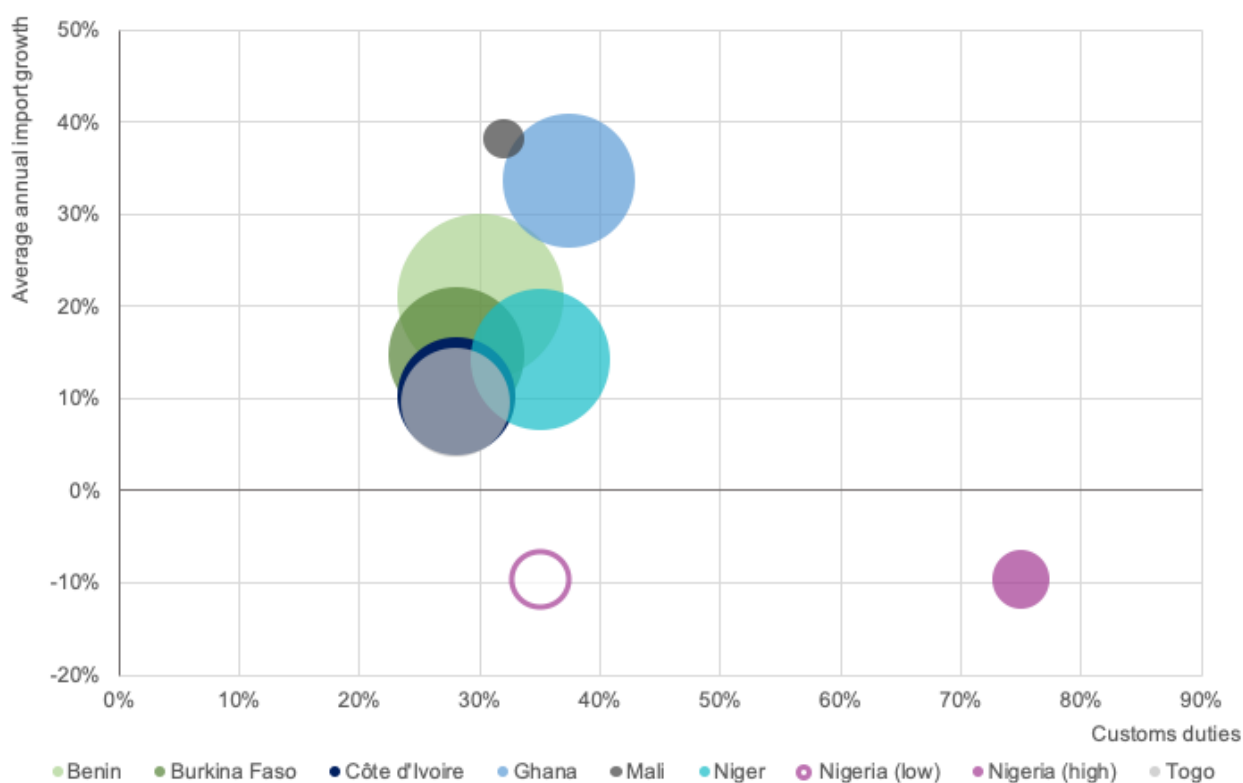
Most West African states have been applying relatively low tariffs on imported rice following the trade liberalisation reforms of the 1990s and the demise of industrial enterprises that usually pre-dated those reforms. In 2015, ECOWAS formally implemented the CET for rice set at 10%, as its member states sought to ensure populations' access to rice. Although member states add other taxes, varying from one country to another, **total tariff protection is generally modest and not well-targeted, and implementation modalities often reduce its effectiveness.**

Since 2015, most ECOWAS countries have applied the 10% CET. Ghana is an exception as it has applied a 20% tariff, using the flexibility the CET provides for. With additional import taxes and the VAT, the total levies on imported rice in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger and Togo amount to about 30%, 28%, 28%, 43%, 32%, 35% and 28%. The total levy imposed in Nigeria depends on the circumstances, shifting between 35% and 75%. By considering just the import tariff, **the import tariff level of ECOWAS countries is low compared to other rice-producing countries in the world**, as documented by Berthelot (2014). Worldwide, large rice exporters tend to apply high import tariffs. It is the case in particular of large Asian producers. As of 2014, India, Thailand and Vietnam, which are also large net exporters, had import tariffs of 70%, 52% and 40%, respectively. Large Asian producers that also import sizable volumes of rice on net, China, the Philippines and Malaysia, had import tariffs of 65%, 50% and 40%.

respectively.¹⁶⁷ Furthermore, West African countries rarely make use, if any, of special safeguard mechanisms or countervailing duties in response to subsidised exports from major rice producers.

Moreover, in the WAEMU zone, "mercuriales" appear to be still used by customs offices to calculate the customs value of rice shipments, despite past reforms that should have eliminated them. Mercuriales are reference values for "cost-insurance-freight" (CIF) prices that are usually lower than prevailing market prices. Using mercuriales has the effect of reducing customs duties (that is the case in Burkina Faso, Côte d'Ivoire and Mali, for example). Besides, customs services often do not have the capacity to estimate the value of rice shipments accurately. And other factors come into play, as we have seen, including stabilisation policies and illegal transshipments due to policy discrepancies across countries. As a result, probably, of varying modalities of implementation of rice import policies across countries and over time, there is no clearly discernible link between taxation level, import dependency and importation trends, as can be seen in Figure 28.

Figure 28. Average annual growth of imports (2008 – 2017) in relation to taxation on imports and import dependency



Sources: FAOSTAT (2020) for import data. Total customs duties, including VAT, based on authors' own research.

The size of the bubbles is proportional to the import dependency ratio (2005 – 2007 average).

Nigeria (low): for importers investing in local rice production, import duties are 30% of the CIF value.

Nigeria (high): for other importers, imports duties are 70% of the CIF value.

A notable fact in Figure 28 is the clustering of Burkina Faso, Côte d'Ivoire and Togo, which have the same level of taxation on imported rice and similar levels of import dependency, showing comparable import growth rates. Ghana stands apart from this cluster, with a higher taxation level, but also a high import dependency and a strong growth

¹⁶⁷ For comparison, as of 2014, the European Union (EU), a large net rice importer, had an import tariff of about 28%. The US, a large net exporter, had an import tariff of 12,5%.

in imports. This contrast probably reflects differences in productivity, public agricultural support and other factors between these countries. In Ghana, high import taxation does not make up for deficiencies in other parts of the rice production and trading systems. Besides, a higher level of import taxation on a product like rice, for which demand is inelastic, is likely to lead to more tax evasion through smuggling, which seems to have been the case for Ghana, for instance between 2013 and 2015.

In most countries, the definition and the enforcement of quality standards and phytosanitary and food safety regulations are inadequate, although some countries, such as Ghana, have more stringent regulatory requirements and enforcement mechanisms. In Burkina Faso and Côte d'Ivoire, for example, against the backdrop of weakly defined and enforced regulations, suspicions that substandard rice regularly enters into the country are common amongst stakeholders, with this rice being suspected of coming from old stocks and containing high levels of pesticides. However, there is little statistical evidence on this sort of events. A recent occurrence of that type of illicit trade is a shipment of rice that eventually reached the port of Abidjan in early 2019, after having been rejected by other West African countries (Silver Konan, 2019). In addition to pesticides, rice can contain mycotoxins and heavy metals. There may also be uncertainty as to the varietal authenticity of imported rice. **Although the importation of rice at low cost serves to fulfil rising consumption needs, these trade policies and regulations, which lack transparency and rules-based decisions, create disincentives for producers and investors in the local rice sector and generate public health risks.**

5.2.2. Policy discrepancy between countries and transshipping

On paper, ECOWAS member states have a common trade policy. In practice, governments often resort to country-specific trade measures to protect domestic markets. **Differences in import policies and regulations across countries are a key factor driving illegal transshipments of overseas rice.** Smuggling between Benin and Nigeria is an emblematic case, owing to the large differential in import tariff policy between these two countries. Illegal transshipping between Côte d'Ivoire and neighbouring countries, Ghana in particular, or Cameroon and Nigeria are other notable cases. Those distribution channels are part of deeply entrenched cross-border trade networks and economies. They are supported by symbiotic arrangement between private and public actors, although changes in the interests and power of the predominant actors can lead to reversals in border policy, affecting the level of transaction costs and the magnitude of transshipment volumes.

Besides differences in import tariffs and regulations between countries, **transport and logistics costs** also constitute a factor in transshipment (both formal or informal) of overseas imported rice. For instance, high transport and logistics costs in Nigeria encourage importers and traders to carry Asian rice through Benin and Niger. Bottlenecks at the ports of Lagos, Port Harcourt and Calabar, high transaction costs, and difficult transport between ports and inner consumption centres, all contribute to increasing distribution costs. Similarly, in the central trade basin, the port of Abidjan, as compared to Accra, offers a more efficient platform in terms of maintenance and logistics. Competition between ports plays an important role in driving the geography of import flows in the region.

Different monetary and exchange rate policies between WAEMU countries, whose currency is pegged to the euro, and non-WAEMU countries constitute another major factor driving rice transshipping. The low degree of convertibility of the Ghanaian and Nigerian currencies has induced black markets for foreign exchange, thus favouring informal trade and distorting the economies of neighbouring countries. That makes it difficult to harmonise rice trade policies between these two groupings.

5.2.3. Trade policy (in)consistency

Besides production and market shocks, **shifts in trade and border policies regarding rice have been a source of price volatility in domestic and cross-border markets.** Sometimes governments in the countries studied change

import tariffs and other taxes. When international prices rise, governments may scrap levies on rice imports for extended periods of time. They may also reduce tariff protection after promises of boosting the supply of domestically produced rice have failed to materialize, so as to bring prices back to levels acceptable to urban populations and avoid social turmoil. Such trade policy shifts can be observed especially in **Ghana and Nigeria**. These countries also resort to tightening border controls or even border closures to block shipments of rice that are re-exported by land by circumventing rules of origin or simply smuggled into their territories. Usually, those measures are relaxed over time, and transshipments gain steam again. In most countries studied, import tariff exemptions are frequently granted to economic operators for discrete shipments of overseas rice, to maintain prices in urban centres at affordable levels for low and middle-income households (the issue of exemptions is reviewed in the next subsection). For example, in Nigeria, the price of imported rice fluctuates widely, and those movements are transmitted to the price of locally produced rice (see Figure 26). In contrast, in Mali, another major rice consuming country, the price of imported rice is rather stable and fluctuations in the price of locally produced rice appear largely driven by the production and marketing cycle (see Figure 21).

Trade and border policy shifts concerning rice are often decided and implemented in opaque manners—at least for the group of actors not involved in the decision-making process. The sudden increase in imports resulting from those decisions adversely affects rice value chain development processes. **Market uncertainty has a deterrence effect on private investment projects in the local rice sector**—for smallholders and large farmers alike, for processors, distributors, technical and financial service providers, and financial investors, as various actors report. Paddy production notably requires large fixed investments, including “sunk costs”, especially in the preparation and maintenance of irrigated land (for example, for Ghana see Ragasa *et al.*, 2014). Thus, unexpected rice trade policy shifts undermine farm and industrial investments that are crucial to improving the competitiveness of the sector.

The lack of consistent, predictable and rule-based rice trade policy has been an acute problem in the recent history of Nigeria. Part of the problem is linked to customs duty waivers and other tax exemptions, to which we will come back in the next subsection. While rice trade policy shifts have undermined initiatives to promote investments in the rice milling industry and efforts to integrate small rice farmers, in the case of the largest rice importer among West African countries they have also had consequential **ripple effects onto the regional market**. Notably, around 2005, the Nigerian government tightened rice import restrictions, following a surge in imports in the preceding years, despite the pledge of the Obasanjo administration in 1999 to boost support to the rice sector. At the same time, the government tried to clamp down on the smuggling of rice and other goods. Those trade measures, in combination with rising oil prices, led to a sharp fall in formal rice imports and sparked a steep rise in staple food prices in Nigeria, causing households to consume cheaper cereals (millet and sorghum) instead of rice (WFP, 2006). That led to an increase in prices of millet and sorghum, which, through cross-border trade in these products, was transmitted to neighbouring countries such as Niger. Simultaneously, a shortfall in cereal production in the Sahel was already putting upward pressure on prices. In those circumstances, the trade policy shift in the largest economy in the region aggravated the effects of the cereal production shock in the Sahel and fuelled a severe food security crisis.

5.2.4. Underlying factors, actors and interests

The rice importation sector is usually heavily concentrated. Yet, competition law is generally not applied to remedy these situations. A tendency towards increased consolidation in the rice importation sector can be observed, especially since the 2008 rice price crisis. In Nigeria and other countries, large importers are supported by even larger international trading operators, who provide the former with financial backing and some form of insurance against regulatory and political risks. These operators themselves benefit from easy access to sizable credit facilities.

In **Côte d'Ivoire**, the monopolistic structure of the imported rice market has resulted in a weakened regulation of rice imports. **The twisting of regulations in this country has led to a massive increase in imports and to large re-exportation flows to Ghana and Sahelian countries.** Most rice entering Côte d'Ivoire is imported in bulk to minimise tariff duties. This also applies to high-quality rice (for which domestic demand is strong) that should be imported in bags instead, according to the regulation in force. Often, the taxed quantities are reduced, while the CIF reference prices used for the calculation of customs duties are below market prices (ECDPM, IPAR and LARES, 2019). Moreover, while the major importer, SDTM-CI, imports mostly lower-quality rice (15-35 and >35% broken), luxury rice—available on the market since 2002¹⁶⁸—is not reported in the customs statistics, suggesting that there is reconditioning of rice once it has been through customs. Similarly, under the *Carré d'Or* label, a wide variety of luxury rice brands are marketed in various packaging, which are imported empty, to mask them as low-quality rice and avoid paying the corresponding duties. As for other importers, most of them are trading companies which buy and resell for their parent companies installed in the places of origin of the rice sold. They often artificially inflate the CIF values as a way of outsourcing the import margins (Traoré, 2018).¹⁶⁹ Moreover, while in Nigeria and other countries imported rice is frequently repackaged and rebranded as locally produced rice, which undermines local value chain development strategies, in Côte d'Ivoire local rice is sometimes repackaged as imported rice.

Customs authorities often do not have the capacity to correctly estimate the value of imported rice. Furthermore, **within public administrations, some decisions concerning rice importation, taken for certain reasons, go against policies and regulations intended to regulate domestic markets and promote local value chains.** In Mali, for example, the granting of import duty exemptions for rice appears to be related to some extent to discretionary decisions favouring certain economic operators, and not only to the aim of balancing rice availability and consumption needs, and of ensuring accessibility for the poor. Furthermore, tax revenues generated by rice imports, given a high share of informality and thus low taxation in the domestic rice economy, represent a considerable incentive to maintain the current trade regime. As a result, large rice importers can exert much influence over rice trade policy formulation and contribute to a form of regulatory capture (see Figure 1).

Similarly, in Nigeria, the interests of strong, politically connected importers influence the implementation of the national tariff policy. As we have seen, customs duty waivers have often been abusively, indiscriminately granted to individual economic operators by government officials, under the authority of the Nigerian Presidency, in an opaque manner, outside the legal procedure, often without being gazetted, particularly since the Obasanjo civilian administration (Modebe *et al.*, 2014). Those waivers have benefitted major economic operators and undermined the formal tariff protection. Reform to address this problem is, however, difficult, in the context of an oil rent economy like Nigeria. In Nigeria, as well as in other countries, electoral cycles appear to play an important role in driving the issuance of customs duty waivers, which allows public sector actors to obtain financial resources for the financing of campaigns. **In short, the problem is not the total absence of regulation on rice imports, but the implementation of the existing regulation in an irregular manner and in favour of some sector incumbents.**

Smuggling "at night" seems less and less widespread in the region, although it is still a common practice at some borders, notably to bring large shipments of imported rice into Nigeria from Benin and Niger, and into Ghana from Côte d'Ivoire and Togo (this practice also concerns Mali, albeit to a lesser extent). In Benin and Nigeria, customs are in some way involved in the transshipment of imported rice. Municipalities on both sides of the border benefit from informal cross-border trade, including **the re-export of rice as an integral part of an economic model adopted by both public and private actors.** In Nigeria, decision-makers in the public administration often have different views on the border policy to be pursued, including in relation to rice trade. Recently, the decision of Nigerian authorities

¹⁶⁸ Particularly Uncle Sam 5-kg perfumed 5% broken, a brand that presumably belongs to SDTM-CI.

¹⁶⁹ Moreover, some stakeholders reported that sometimes local rice is repackaged as imported rice (ECDPM, IPAR and LARES, 2019).

to close land borders to trade in goods, in particular to stop the re-exportation of rice coming from Benin, challenged the free movement of goods between ECOWAS countries and destabilised neighbouring economies and local industries in the sub-region. However, border policies depend on a multitude of economic and security factors¹⁷⁰ (smuggling of several goods, arms trafficking and others), as well as the various interests of powerful political actors and economic operators who benefit from cross-border economic activities.

In short, the main economic operators in the rice importation system benefit from significant loopholes in trade rules. In a context where structural and historical factors have already created heightened rice scarcity in domestic food economies, various policies, formally intended to regulate rice trade, are actually circumvented by powerful actors who obtain considerable rents from importing and distributing overseas rice. The “variable-geometry” implementation of import tariffs, other levies and non-tariff measures, between and across countries, is a major factor making such rents available to those actors. Some public actors too reap part of the rents generated by rice imports. That happens at the central government and administration level (including customs services), as well as at the level of local authorities, usually in localities near border crossings, when rice is transhipped, and possibly in ports where overseas rice is shipped. As rice imports have significant impacts on domestic rice markets, particularly on their stability, those loopholes adversely affect the incentives of operators susceptible to investing in local and regional value chains. **The rice importation system most likely has an influence on the disposition of policy-makers to reforming rice policies and expending public resources on investments in the domestic sector.** The link between the proceeds from rice imports and the financing of electoral campaigns, common in different countries, suggests that rice trade has an influence on policy choices.

5.2.5. Trade transparency issues

The overseas rice import sector suffers from transparency issues. This concerns the quantity, provenance, transit routes, age of rice and other qualitative characteristics. Discrepancies between different data sources on rice imports are common. They occur when comparing data from national authorities to data from international organisations, international databases among themselves, or also imports recorded by national authorities to **mirror flows** (although there is an explanation related to legitimate practices of traders). Those differences also reveal a lack of transparency, or at least of accuracy, in rice trade monitoring.

The lack of transparency in rice trade and market management is manifest in official statistical data. As we showed, international databases such as ITC (based on the United Nations Comtrade Database) contain large discrepancies between imports declared by West African countries and exports reported by Asian suppliers. As we mentioned, in the case of Ghana, trade data directly provided by the Ministry of Trade differs from both FAOSTAT and ITC data. For trade, but also production and consumption, many data points are missing. Official data on (legal) transshipment are non-existent, to our knowledge. For example, market operators indicate that there are large transshipments of rice from Côte d’Ivoire to Ghana, in large part informally, which would amount to 200,000 t/yr.¹⁷¹ Yet, according to FAOSTAT, five-year average rice exports from Côte d’Ivoire to Ghana for the period 2011 – 2015 amounted to just 9,200 t.

International traders’ risk management strategies, which involve adjusting shipments to rapidly changing market conditions, could explain some of those discrepancies. Complex international trade networks, with increasing quantities of rice transiting through trading platforms such as the United Arab Emirates, could also explain some of the gaps in the data. Involuntarily mismeasurement at the level of customs offices and systems may also be a factor. Voluntary misreporting, possibly, to evade taxation on imported rice and illegally tranship rice (by exploiting policy

¹⁷⁰ The question of how to reconcile the principle of free movement of persons and goods with the security imperative is an increasing problem in the region.

¹⁷¹ Pers. communications, Abidjan, October 2019.

discrepancies between countries) could be a less benign factor. In any case, the uncertain reliability of data hinders analysis to inform policy-making.

The lack of transparency and good data hinders market and policy analysis. The scarcity and dubious quality of trade data undermine evidence-based policy-making as well as the evaluation of mechanisms used to regulate rice markets. It also hinders the participation of uninformed non-state actors in policy-making processes, particularly to address the issue of fraudulent trading activities.

5.3. Domestic market organisation and stabilisation

From the country and sub-regional analyses transpires an almost constant tension between long-term rice sector development objectives, or **structural policies**, and governments' objectives of ensuring food security during periods of production shortfall, humanitarian crisis or international price hikes. The latter usually involve **stabilisation measures**.

Economic reforms implemented in the early 1990s, as part of the structural adjustment programmes, led to the **liberalisation of the rice sector** and the dismantlement of parastatal companies involved in the importation and production of cereals, including rice. The form, extent and pace of liberalisation and privatisation varied across countries. In some countries, state trading enterprises were quickly replaced by private companies inheriting from oligopolistic, if not monopolistic, positions. In others, particularly in francophone countries, the state only partially withdrew from the agricultural sector, ceding to the private sector activities such as the procurement and distribution of inputs or the organisation of farm production and marketing, but remaining involved in the processing and distribution of agricultural products to a certain degree. Yet, those reforms left these countries with little capability to structure and stabilise agricultural markets.

Several of the countries studied (Burkina Faso, Ghana and Mali notably) use instruments to influence the level and stability of rice prices and supplies that resemble some of those of a typical toolkit for rice market regulation, which for example was successfully used by Southeast Asian countries in the period following the Green Revolution.¹⁷² **Public agencies**, such as the SONAGESS in Burkina Faso and NAFCO in Ghana, **intervene in domestic paddy and rice markets to support farmers**. Governments **set price ceilings to ensure that vulnerable consumers can access rice**, and they **grant import tariff exemptions** to rice importers to boost supplies of rice in the domestic market. In the post-2008 period, several West African governments even took measures that reinforced the role of the state in rice marketing, notably through the expansion of **intervention stocks**, to support producers and at the same time ensure

¹⁷² According to Gérard *et al.* (2011), this typical approach to market regulation consists of a government agency intervening in the market to keep prices within a band, with appropriately set floor and ceiling prices. The ceiling price gives a protection to vulnerable consumers' access to rice, and the floor price guarantees a minimum price for farmers so as to recoup its costs, while still ensuring that the price reflects changes in market fundamentals to some extent. Such a scheme requires the government to control, wholly or partly, imports and exports of rice. That is usually done in combination with interventions in the domestic market for locally produced rice, whereby the government commits to buy at a predetermined part of the crop at a fixed, minimum price from farmers, farmers cooperatives (possibly targeting vulnerable areas) or traders. Generally, this type of scheme is complex and in countries where it has been used it has been difficult to implement consistently over time, requiring rigorous management procedures and inter-sectoral coordination. It is usually financially costly (although there is also a cost to not managing the consequences of price instability) and can result in abusive practices in settings with weak institutions. It can lead to overproduction. Such a regulation scheme is usually more effective when it is managed transparently, predictably, based on rules negotiated and agreed upon with public and private operators. Parameters such as floor and ceiling prices are politically sensitive in particular.

food security.¹⁷³ However, without all the instruments to influence rice markets that allowed Indonesia, for example, to transform itself from a large importer of rice in the 1970s to a self-sufficient country in the mid-1980s (Gérard, 2011), the stabilisation policies of those West African countries have been of more limited effectiveness in promoting the development of the sector.

Policy and market developments in Mali in recent years suggest that in the late 2000s and early 2010s the effectiveness of stabilisation measures was limited, and they did not have strong effects on the prices of imported and locally produced rice (Diakité and Bagayoko, 2014). The import regulation mechanism established a decade ago still seems to lack robustness and consistency. Deficiencies in data on cereal stocks, including rice, and opaque decision-making processes regarding import levy exemptions have caused uncertainty among economic operators and possibly some instability in the market for locally produced rice, domestically and across borders.¹⁷⁴ Export bans have been counterproductive, as they did not improve the affordability of rice in the short term, but they also adversely affected local producers.

In addition to the uncertainty that the public management of imports creates, in the manner in which it is currently done, **state intervention in domestic markets may undermine the incentives of private value chain actors in making investments in productivity- and quality-enhancing technologies**, organisational practices and coordination mechanisms.¹⁷⁵ Furthermore, the recurrent complaints from farmers that procurement prices imposed by government agencies are too low suggests that it is also an instrument to generate **rents** for public sector actors.

Apart from price, quality is paramount (especially homogeneity) to meet not only consumer demand but also the derived demand from commercial intermediaries. From a trader's viewpoint, imported rice has a quality that is certain, constant from one shipment to another, at least in appearance (its nutritional quality is rather low). This certainty regarding quality is often lacking for locally produced rice, in addition to its low apparent quality level in general and irregular availability. Yet, in most countries covered in this study, **quality and food safety standards are poorly defined or implemented for locally produced rice**. As in Côte d'Ivoire, the promotion of international standards has not considered the local specificities of consumer preferences and paddy production conditions. In a few countries, if any, have public and private actors taken a coordinated approach to specify and deploy quality and conformity assurance systems in the rice sector. That has likely hindered private investment in quality-enhancing technologies and processes as well as efficient coordination between producers, processors and distributors in the rice value chain. And that has also hindered improvement in the appeal of locally produced rice compared to imported products.

In a context of large-scale reliance on rice and wheat imports, **the structural adjustment reforms have led to disinvestment in public goods and services supporting an “industrial fabric” that enables the efficient production, processing and marketing of rice and other cereals**. Actors representing the domestic rice sector, the rice farmers organisations, as well as the *interprofessions*, have had limited influence on rice policy reforms, which were mainly borne out of the initiative of governments and donors. The current situation of Côte d'Ivoire illustrates the obstacles faced by initiatives to boost the development of rice value chains, linking farms to consumers—adjustment to

¹⁷³ As a way of responding to food insecurity, public procurement from cereal producers is still seen as a way of securing supplies for vulnerable households, while ensuring remunerative prices for producers. This type of intervention is regularly advocated by the *Réseau de prévention des crises alimentaires* (RPCA).

¹⁷⁴ In addition, in Mali, the response to the security and humanitarian crises seems to have exacerbated the problem, as international humanitarian aid has given rise to a more frequent use of import tariff exemptions for imported rice, which have been enjoyed by some importers.

¹⁷⁵ In Thailand, for example, increased intervention of the state in paddy purchasing from 2011 onwards led to lower rice quality (Bickel, 2013).

change in relative prices is not so easy as in neoclassical economic models.¹⁷⁶ In Mali, for example, industrial and semi-industrial rice mills (*rizeries*) have declined since the structural adjustment programmes.

In this environment, **initiatives to make import allowances linked to the production or sourcing of locally produced rice have met strong headwinds. Public subsidies to large-scale mills, without comprehensive industrial development strategies, and with poor linkages with agricultural policies and family farms, have often failed, with those establishments being too costly to operate and not having enough paddy supplies.** In reality, in countries like Nigeria and Côte d'Ivoire, investments in rice mills by importers have often served to obtain "political licences" to import and distribute overseas rice.

5.4. Intra-regional trade dynamics and obstacles

In different parts of the region, cross-border value chains of locally produced rice are a reality, for example in the Dendi region, a cross-border area between northern Benin, southwestern Niger and northwestern Nigeria. In general, the development of such networks is hampered by **high transport and logistical costs.** In addition, rice transport is particularly subject to harassment. Although West African countries have a deficit in rice, various sector actors recognise that the output growth potential in the region is sizable and there are cross-border complementarities within the rice sector as well as between rice and other sectors.

In the case of Dendi, a **dense cross-border rice trade network** involves many small-scale actors, mostly women.¹⁷⁷ However, a small number of powerful intermediaries, men, control the supply chain. Only these intermediaries can ensure the movement of paddy and rice across borders despite various obstacles.¹⁷⁸ In this zone, investments in the milling industry on the Nigerian side in the post-2008 period appears to be a key driver of cross-border trade flows. Differences in natural endowments, infrastructural linkages, industrial specialisation, seasonality and consumer preferences in cross-border regions can drive trade, even though at the national and regional levels import dependency is large.

Yet, policy-makers have not paid attention to intra-regional trade dynamics. The development of the rice sector has probably suffered from that, as cross-border trade flows interact with domestic value chains in different ways. Although those trade dynamics represent opportunities for rice farmers and entrepreneurs in the rice processing sector, it has largely been left to the strongest actors to reap the benefits from those economic exchanges (uncompetitive trading practices, skewed distribution of value added between different types of actors in the supply chain, poor transparency of payments and fulfilment of contractual obligations). Given that political priorities usually lay with national self-sufficiency, few efforts, if any, have been made to coordinate national policies and private investments so as to exploit those opportunities by facilitating intra-regional trade. The challenge of regulating cross-border trade in rice to improve market outcomes for farmers and small-scale traders, avoiding disruptive spillover effects onto value chain development efforts, and making it more transparent (for example, between Burkina and Mali, Burkina and Ghana, and Benin and Nigeria) has also been left unaddressed.

The interactions among market outcomes of extra- and intra-regional trade measures suggest that **inconsistent trade and market regulations (for example, export bans on locally produced rice) ultimately hindered the government's declared objective of supporting the development and enhancing the competitiveness of the**

¹⁷⁶ In Côte d'Ivoire the function of the national food security stockpile has even been privatised in effect.

¹⁷⁷ In the whole region, women play an important role in the marketing of locally produced rice.

¹⁷⁸ See OECD SWAC (2019) for a detailed analysis of women and trade networks in this region.

domestic rice sector. There is a need for governments to consider the specificities of local and cross-border areas when devising policies aiming to stabilise rice prices for low-income consumers, and to better coordinate their national policy responses to domestic and international market shocks. Cross-border rice trade can be a contributor to rice value chain development, provided that policies take it into account. It can as well play a role in response to fluctuations in international market conditions, balancing supply and demand between surplus to deficit areas on different sides of a border, thus contributing to food security.

6. Towards measures to better regulate trade and promote the development of the rice sector

We now turn our attention to possible policy changes that could improve the trading environment for the development of rice value chains in West African countries. We first look at the case of Senegal (6.1). Although it is not a focus country in this study, recent initiatives of public and private actors in this country provide a relevant basis for this reflection. Then we outline a general approach to better managing the influence of the international market on the local sector, while also developing domestic markets (6.2). We also look at the potential implications of this approach (6.3). Lastly, we formulate some concrete steps to advance policy processes and address challenges in policy planning and in coordinating multiple and various actors (6.4).

6.1. Lessons learned from recent policy developments in Senegal

The experience of Senegal is instructive as it shows an alternative approach to the development of the domestic rice sector compared to that followed by Southeast Asian countries such as Indonesia.¹⁷⁹ It is also relevant because of the geographical and institutional similitudes between this country and other West African rice producers. In 2012, the newly elected Government of the Republic of Senegal reaffirmed a strong commitment to the growth of rice production, with the objective of achieving self-sufficiency in response to the food price crisis of 2008.

Like many West African governments, Senegal is implementing a national rice self-sufficiency program (PNAR) that sets production targets of 1,600,000 t of paddy (corresponding to 1,080,000 t of white rice) to fully meet the national demand. These objectives are set out in the Senegalese Agriculture Acceleration Program (PRACAS), the agricultural component of the Emerging Senegal Plan. This program includes incentive measures such as subsidies on agricultural inputs and equipment, debt forgiveness, development repairs, as well as the development of new areas. These various measures, as well as the commitment of the various players, have significantly intensified rice farming (irrigation, mechanisation and others) and increased output. **This rapid increase in production then caused a cyclical problem of poor sales of locally produced paddy and rice.**

The Senegalese government has taken an innovative response to this challenge, by promoting an agreement with the private actors in the rice importation sector, also including rice producers and distributors organisations as well as banks.¹⁸⁰ In March 2015, the Senegalese Ministry of trade, the National Society for the Development and

¹⁷⁹ See footnote 172.

¹⁸⁰ Senegal has solid experience in regulating the marketing of agricultural products (onion, carrot, potato, tomato) through dialogue with importers and distributors. Since 2003, the government has frozen imports of onions for a certain period of the

Exploitation of Land in the Senegal River Delta and the Senegal River and Faleme Valleys (SAED), together with the Interprofessional Rice Committee (CIRIZ), rice importers and distributors and the National Bank for Economic Development (BNDE) signed a memorandum of understanding on the marketing of Senegalese rice. This protocol is the result of a directive issued by the Presidential Council on February 2, 2015, relating to the **establishment of a marketing mechanism for Senegalese rice backed by an import regulation scheme**. The success of this consensual mechanism between different stakeholders had several foundations: (i) an asserted political will; (ii) an environment that has contributed to improving the quality of rice; (iii) innovations in financing and inventory management; and (iv) substantial experience in regulating trade in agricultural products.

The agreement between the government and the traders was based on an assessment of their market shares of imported rice and the determination of purchasing quotas of locally produced rice for which traders made commitments. The assessment also looked at the production capacity of the rice processors and the quantities of paddy available. **To ensure an adequate supply in terms of quality, requirement specifications were drawn up, involving the definition of quality standards and the certification of rice mills.** The regulation of price determination, to ensure sustainable and equitable remuneration for all the different actors in the local sector, was another key element of the scheme. For decades, domestic rice has suffered from a reputation for inferior quality resulting from several factors (lack of homogeneity, mixture of varieties, presence of stones, etc.). Several interventions have helped to overcome these problems and significantly improve the quality of Senegalese white rice. The dissemination of good farming and marketing practices—the starting point of which was the use of selected seeds, downstream improvements in processing, and the provision of storage infrastructure—were crucial to lay the foundations for improving the quality of white rice and engaging with traders.

Drawing lessons from campaign credits for the acquisition of inputs, **the agricultural bank (*Caisse Nationale de Crédit Agricole du Sénégal, CNCAS*) initiated an integrated credit system** with the support of the USAID Naatal Mbay project. In this system, producer organisations benefit from a credit from the bank, enabling them to acquire inputs from suppliers and carry out farming operations. At harvest, this credit is reimbursed in kind, and the paddy is stored in stores controlled by the bank. At the same time, a number of rice mills are approved by the bank and benefit from a line of credit for the purchase of paddy. As soon as the rice mill takes possession of the producer organisation's stock, the bank proceeds to a set of records and the producers can then access a new credit. The paddy and white rice stocks are also placed as collateral at the rice mill level. With the purchase of white rice by a trader, the bank credits the rice farmer's account after debt clearance and then authorises the trader to remove the stock. After a physical test in 2016, these procedures were automated through the computerised inventory management platform. With this tool, the bank and its partners can monitor the evolution of stocks and identify possible intervention points.

During the same period, BNDE made a line of credit available to importers for the purchase of Senegalese rice. In addition to these innovations, the government decided, during the Presidential Council in February 2015 devoted to rice, the establishment of a **guarantee fund** for rice farmers of the order of 3 billion to lighten their eligibility conditions for the financing from CNCAS and a **marketing fund** of up to 5 billion to facilitate access to financing for rice value chain actors. It also asked for a systematisation of the supply of government institutions (army, hospitals, national solidarity, food security commission, universities, and so forth) from domestic rice production. Commercial banks have played a role in the scheme by providing financing for fixed productive investments as well as for campaigns.

year. From 2003 to 2016, the freeze period went from 2 to 8 months. The same is true for carrots, whose freeze increased from 3 to 7 months and 20 days between 2010 and 2016. More recently, the freeze on imports of potatoes started in 2014, going from 2 months 10 days to 4 months 20 days in 2016. For tomatoes, there is a protocol conditioning the importation of triple tomato paste in proportion to the quantities of local tomatoes purchased from producers.

This rapid overview clearly shows that **the advances based on the memorandum of understanding on the marketing of Senegalese rice are the result of a combination of complementary and enabling factors**: the resolute commitment of public authorities which have put rice at the heart of national priorities and thus favoured the increase in production; the synergetic interventions of several development partners who have significantly improved the quality of rice; the introduction of major innovations in the financing of the value chain; and past experiences in regulating agricultural value chains. The problem of poor sales of rice has decreased, while the availability of rice from the Senegal River Valley has increased following the adoption of techniques and equipment increasing productivity (sorters in particular). **However, the public-private agreement, as well as the cohesion between the private actors of the import system, remains to be consolidated to attain the expected results.**

6.2. A possible approach to promoting an enabling rice trading environment

From the diagnosis of rice trading systems made in this study, **three areas of reform**¹⁸¹ have emerged: the **regulation of extra-regional imports** to avoid disturbance from the international market, the **structuring of domestic markets** to improve the quality-cost competitiveness of locally produced rice, and the **promotion of intra-regional trade** to develop a regional market. The measures proposed are not intended to serve as a blueprint for reform, but rather provide a starting point and a set of options to conceive technically appropriate, politically feasible policy and regulatory changes adapted to particular country contexts and to promote coordinated policies between ECOWAS countries. These options are based on experiences in West Africa and other regions as well as emerging and recent initiatives in West African countries. These three areas of reform present potential synergies. However, they leave aside fields of intervention in the trade sector that are relevant to agri-food value chain development but less specific to the rice sector. For example, intra-regional trade in inputs and equipment is another important factor in the development of the rice sector, given the relatively high cost of fertiliser and the scarcity of improved seeds in the region.

6.2.1. Regulation of extra-regional imports

Although low-income households in West African countries are very sensitive to the price of rice, especially in urban areas, **better protection of intra-regional value chains** vis-à-vis destabilisation risks linked to the international market must be considered, while preserving the free movement of locally produced rice within the ECOWAS. Protection should not be reduced to a simple increase in tariffs. It must be more "fine-grained", or **targeted**, using a range of instruments, and **more transparent and effective**.

On **tariff and quantitative aspects**, the trade policy regime must be able to adapt to changing circumstances by emphasising two aspects:

- A reduction in excessive short-term variations in the prices of imported rice (in particular possible strong downward variations), as well as abrupt increases of imports (import surges);
- The management of excessive short-term price variations of locally produced rice (linked to local and regional market conditions), without undermining the response of the market in the medium-term as much as possible (by avoiding modifications of tariff protection or tax exemptions).

Many stakeholders, ROPPA notably, have been advocating for an ECOWAS CET on rice at 35%. When the CET was established in 2015, policy-makers were reluctant to impose a 35% tariff on rice partly because of fear that,

¹⁸¹ Sections 6.2, 6.3 and 6.4 build upon the policy propositions emerged from the discussions with experts, practitioners, private sector actors and public administration officers held during a workshop organised by the project team in Abidjan on 1 – 2 October 2019 at AfricaRice headquarters.

combined with high international prices, this tariff level would make rice too expensive for many in their countries. An alternative instrument to consider is a **variable import levy**. This approach could help obtain remunerative prices for rice farmers and processors and stabilise the prices of both imported and locally produced rice.¹⁸²

It would comprise a fixed price for rice entering the regional market and a variable import tariff that depends on the international market price. The fixed price would be set on the basis of production and marketing costs in West African countries. It would have to be set above the cost level in the market catchment areas that are actually or potentially competitive given a number of constraints (food security objectives, resources available to invest into the sector, opportunity costs of not investing in other sectors, and so forth). This price would be fixed for the crop marketing year and could be slightly adjusted from one year to the next. The levy would be relatively high when the price of imported rice is low, and relatively low when the price is high. In any case, the variable levy would be predictable and based on rules. As explained by Berthelot (2014), putting in place such an instrument at the level of ECOWAS would have to be allowed by the World Trade Organization (WTO). Also, its effectiveness would probably be subject to shortcomings similar to those affecting current *ad valorem* tariffs.

The general level of tariff protection needs to be strengthened:

- The **use of mercuriales** should be phased out as they usually reduce the effectiveness of tariff protection; instead, customs duties should be systematically based upon the market value of rice shipments;
- The **measurement of imported quantities** by customs services, and therefore of the taxation base, should be more rigorous;¹⁸³
- The effective use of **differentiated tariff lines** depending on the type of rice could contribute to a better regulation of imports to promote West African value chains, in particular to monitor and address issues related to the importation of rice in bulk.

In addition, in the context of national trade policies and the ECOWAS Common Trade Policy, effective **trade defence measures** could be useful to avoid sudden surges in imports and to counter international dumping. The end of the initial period of implementation of the ECOWAS CET (2015 – 2019) offers the opportunity to initiate a process of revision of tariffs and other trade policy instruments concerning for rice.

To ensure vulnerable populations have access to rice, in addition to other types of measures, **active management of imports** must first be based on sound market conditions and a rigorous assessment of import requirements. That should be based upon a proper assessment of domestic stocks and also the response of cross-border supply. The use of **exemptions** from customs duties and other taxes must be cautious, **limited as much as possible, predictable and transparent** (while optimally using local and regional supplies).

The regulation of imports also involves **non-tariff protection**, particularly at entry points:

- The assessment of **sanitary risks** and **quality** should be more rigorous and systematic, and the standards in force stricter (this could include a control and a maximum limit set on the age of rice);
- Strengthening the **traceability of imports** as part of an international regulatory framework, thus promoting the implementation of rules of origin and food safety regulations.

6.2.2. Domestic market structuring and sector development promotion

Domestic market structuring and regulation, on the one hand, **and regulation of extra-regional imports**, on the other hand, **are synergistic**, as shown by the case of Senegal. Incentives for importers and financiers to get involved in local and cross-border value chains is a key factor.

¹⁸² Europe used variable levies for the implementation of the Common Agricultural Policy (CAP) until 1994.

¹⁸³ It has been mentioned that the quantity of rice transported by boat is sometimes measured by the draft.

This line of reform includes the following orientations:

- The setting up of **required specifications for the rice supply**, with a **standardisation of rice products**, and the **delivery of appropriate accompanying support** for value chain actors (in particular family farms in rainfed lowlands and small-scale irrigated schemes), to coordinate agricultural producers, cooperatives, rice mills, distributors and other links upstream and downstream in the supply chain, and to establish contractual and trust-based mechanisms to ensure an **adequate supply of rice** in terms of **quantity, quality** (varietal authenticity,¹⁸⁴ homogeneity, moisture content, impurity levels and other aspects), **food safety** and **environmental sustainability** (*Sustainable Rice Practices*); innovative practices tested and promoted by several actors (for example the GIZ Green Innovation Centres or Rikolto's sustainable rice standards) could serve as experiments;¹⁸⁵
- The implementation of **pricing frameworks** allowing for a viable remuneration of production factors and an equitable distribution of value added between the different actors in the value chain (in relation to costs and risks), while giving incentives to invest in improving productivity (including paddy yields), quality and food safety;
- Further development and better integration into marketing systems and food crisis management mechanisms of **private storage facilities and services** (warehouse receipt systems and "*stocks de proximité*");
- A **commitment by imported rice distributors** to source locally produced rice, with the use of contracts with local processors and farmers, in the form of quotas or other arrangements to **couple imports with local purchases**, along with adequate and inclusive **investment incentive measures** to build processing, storage and distribution capabilities (guaranteed credit lines for example);
- **Public procurement** favouring locally produced rice purchases (to supply public schools, hospitals, the army, prisons and also humanitarian aid agencies), as some countries are already starting to do.

In addition, strengthening and better enforcing **competition laws** could limit concentration in the importation and wholesaling of overseas rice, and deter unfair commercial practices in local and cross-border supply chains.

6.2.3. Development of the West African rice market and intra-regional trade

The West African market offers considerable opportunities for the development of rice value chains. This line of reform includes the following orientations:

- An **approach sensitive to consumer demand**, in particular in the major consumer markets in the region, with support to local and cross-border value chains, **better taking into account consumer preferences and rapidly changing diets**, including nutritional preferences among different classes of consumers— West African rice has a superior nutritional quality compared with low-quality overseas rice; the development of differentiated rice products with particular organoleptic characteristics, biofortified and with protected geographical indications could attract consumers usually buying imported rice;
- At the same time it should **promote the diversification of diets heavily based on rice to slow down consumption growth**;
- The **facilitation of intra-regional trade** for the development of value chains in **sub-regional trade basins and cross-border regions**: transport, logistics and border infrastructure along **trade corridors**; simplified customs procedures under the ECOWAS ETLS Preferred Trader Scheme; and specific accompanying

¹⁸⁴ The importance to give to the varietal recognition was mentioned.

¹⁸⁵ The **standardisation of rice products must be adapted to national and regional contexts**, the objective being to strive towards international quality and safety standards, while taking into account the capacities of the operators of the sector and consumer preferences, **synergy with non-tariff protection**, so that standards do not result in a decommissioning of locally produced rice if it does not comply with certain international criteria that are of little relevance locally; the gradual harmonisation (or mutual recognition) of rice regulations and standards at ECOWAS level will contribute to the development of the regional market.

measures for small-scale, informal cross-border trade operators, especially to ensure the safety and economic opportunities of women traders;

- The **development of production and intra-regional trade of by-products of rice farming and processing (for example, animal feed and rice straw for bioethanol)**;
- The anticipation of and the adaptation to **climate change in** regional rice production, trading and consumption systems (in the broader context of the cereal sector).¹⁸⁶

6.3. Economic and food security implications, preconditions for reforms and critical risk factors

6.3.1. Plausible effects and interactions among measures

For the regulation of extra-regional imports, it was recommended: (i) to initiate a variable import levy; (ii) put in place effective safeguard measures to avoid sudden surges in imports and international dumping; (iii) implement an active management of imports based on sound conditions (and limit exemptions); and (iv) strengthen the level of tariff protection by solving the issues of mercuriales, resort to a more rigorous measure of quantity imported, and make use of differentiated tariff lines. These various measures would generate higher import prices and lower import volumes, thus making local rice more competitive.

Properly implemented (predictably, based on agreed-upon rules and transparently), a **variable import levy** would contribute to stabilising rice prices in domestic markets and cross-border market catchment areas at targeted levels that provide incentives to local producers, while ensuring affordable prices for a large part of the population with low to middle incomes. Set appropriately, the fixed price could alleviate the problem of customs duty exemptions that often induce uncertainty among local value chain actors. It could create additional volatility in international markets, although actors in the international rice trading system would take this policy factor into account in forming market expectations. The variable import levy, harmonised at least at the level of **sub-regional basins**, would alleviate the problem of smuggling.

By implementing the proposals for non-tariff protection with a rigorous assessment of the health risks and the quality of the imported product, and by improving the traceability of the imported rice, the quality of the product would be improved significantly, with rising effects on prices. Better quality and higher prices would reinforce the above trend in lower import volumes. A higher quality of imported rice, all else equal, would improve nutritional outcomes among adults and children whose diets include rice as a major source of calories, and more generally public health.

The proposed intervention for the structuring of domestic markets would also result in three main effects: (i) Improved quality of domestic rice; (ii) adequate and efficient distribution of domestic rice; and (iii) sustainable domestic value chain.

Developing required specifications and promoting **standardisation of rice products** with an accompanying support of value chain development agents would result in an improved quality of domestic rice as proven in several pilot programs in the West Africa region. Scaling up these programs will be key to future success. Designing a **regulatory framework that quantitatively couples imports with local purchases**, taking **investment incentive measures** aiming to develop local production and engaging public procurement in favour of locally produced rice would all contribute

¹⁸⁶ Arable land suitable for rice and yields are likely to decline in some parts of the region.

to improving an adequate distribution of domestic rice. Finally, implementing a **pricing framework** that ensures that production factors are correctly remunerated, that quality enhancement is rewarded, and allows an **equitable distribution of value added along the value chain** would contribute to guaranteeing a sustainable domestic value chain.

The development of **private storage capacities**, progressively replacing traditional intervention stocks as the main mechanism of intertemporal redistribution of rice supplies (although strategic stocks, comprising rice, for food security purposes should remain in place), would contribute to the stabilisation of prices in the domestic market, for the benefit of farmers and processors.

There can be strong, **mutually reinforcing interactions** between the recommended measures. For example, measures that generate higher import prices and lower volumes are reinforced by non-tariff measures that improve the quality of imported rice. Likewise, improved quality of domestic rice would facilitate its distribution because of increased consumer demand and greater efficiency in rice milling operations, thus reinforcing the response capacity of the domestic value chain and its economic viability. Increased private storage capacity would work in synergy with the domestic pricing framework and the variable import levy towards domestic market stabilisation. That stability, while preserving market signals, would create a better climate for **private investment** in the value chain.

Interventions that concur in developing sub-regional trade basins by improving the functioning of **cross-border trade** and value chains would also contribute to increasing the demand for domestic rice, regionally. It could allow for the exploitation of economies of scale and possibly also of scope, thus contributing to productivity growth and diversification in West African rice economies, thereby strengthening their **competitiveness**. Better established cross-border trading activities and value chains would also contribute to food security, by lowering and stabilising consumer prices, as well as to bottom-up economic integration within the region. **However, trade facilitation usually entails winners and losers**. In the context that has been described and analysed above, large traders dominating cross-border networks could be the operators benefitting the most from better trade-supporting investments. Conversely, smallholder rice farmers, women parboilers and small-scale traders would benefit little. Or, if powerful economic operators were to be the losers, their resistance could lead to the failure of reforms and public investments.

6.3.2. Political economy realities of the rice sector and the feasibility of trade reforms

The analysis summarised in Section 5 and the proposals that follow concern mainly with "formal" policy processes and institutions, that is, the more visible aspects of national and regional policy-making conducted by political leaders through state and regional organisations and directed at the rice sector. At that level, the regulation of extra-regional imports is a central component of a strategy that reformist policy-makers could employ to promote rice sector development and food security. However, as can be seen in the countries covered by this study, **formal policy processes are often accompanied by less visible decisional processes that rest on informal ways of dealing with various issues in the rice sector**, within countries, between the state and business actors, and between states. These informal processes affect policy formulation, implementation and outcomes. The operation of markets and supply chains is not just driven by technical and economic considerations, but also by the control of access to resources and of marketing channels, rent-seeking and power relations between different groups of actors. These drivers themselves depend on import dependency, the geography of production, relations between the state and the business and farm sector, and domestic politics. Alongside formal policy commitments, the redistribution of rents coming from the rice sector and the relations between state and non-state actors appear to have a strong influence on policy choices, implementation modalities and effectiveness, with variations across countries. Those factors and actors, particularly those who stand to lose from rice trade reforms (traders, importers and many other actors involved in the distribution of rice), can go against official rice development strategies.

For those reasons, the types of rice reforms seen in Senegal are unlikely to be easily put into practice in every other country in the region. The early outcomes of recent rice sector reforms in Mali are mixed, with the government providing producers organisations with access to institutional markets while also applying *mercuriales* (undervaluing the tax base) and granting customs duty exemptions to some importers. Similar practices take place in Nigeria, where ambitious rice policy targets have hardly been met as the interests of importers have prevailed over local value chain development and employment creation objectives. The structure of the market for imported rice in Côte d'Ivoire, with a company holding a quasi-monopoly on imports, offers little room for a genuine commitment to reform. Generally, the high level of concentration of rice importers in West African countries in all likelihood allows them to exert a strong influence on policy-making in situations where officials have weak incentives to implement policies, and regulatory frameworks and tools are incomplete and poorly equipped to enforce them. Adding to that, the frequent protests by urban dwellers wanting affordable food, political elites' objectives to access to power or be re-elected and the uncertainty about the potential supply response of domestic suppliers, the forces opposing reforms are difficult to counter. The lack of transparency in rice importation mentioned in Section 5 is just another result of those forces.

Aside from the fact that policies directed at rice production and trade play out mainly at the national level, **the negotiation process of the ECOWAS CET, which were concluded in 2013, illustrates well how diverse interests have determined trade policy concerning rice.** In this process West African farmers, represented by the *Réseau des organisations paysannes et de producteurs de l'Afrique de l'Ouest* (ROPPA), alongside Nigerian actors and others, were successful in advocating for a fifth tariff band at 35%. However, they failed to push governments to classify a number of staple food products in this fifth band, notably rice, sugar and milk. Other interest groups, particularly rice importers well connected to political elites, and possibly also intermediaries in transshipping networks, weighed more strongly in favour of a low tariff. As Blein and Beaujeu (2014) argued, critical factors reduced the influence of farmers organisations: the lack of a sectoral approach mobilising the actors of the sector; and the fact that the rice sector is atomised, besides a few large, commercial growers in some countries, with weak rice farmers or interprofessional organisations (often set up by governments) and sometimes with contradictory interests. Information asymmetry and insufficient collective action and organised pressure in favour of a higher CET for rice contributed to that outcome. Although Nigerian actors wanted a higher import tariff, for some reasons, they accepted a lower tariff, while countries such as Côte d'Ivoire, Gambia and Guinea wanted a low tariff. Yet, **this is an important characteristic of the region, Nigeria can support or undermine regional initiatives.** For instance, in 2019, Nigeria undermined the ETLS by unilaterally closing its borders, ostensibly to fight smuggling, but also as part of power relations between political and economic elites in Benin and Nigeria.

It is in the light of those political economy realities that ambitions for rice sector reforms should be set. **Aspirations may coincide with genuine commitment to implement policies and solve problems identified in this study only if there is sufficient political traction.** "Champions" may exert a positive influence on reform processes and contribute to improving transparency and rigour in policy-making and effectiveness in implementation. **Regional initiatives** may provide national policy-makers with a basis for legitimising decisions going against some vested and short-term interests. As the case of Senegal suggests, advancing processes for the regulation of extra-regional trade and the development of the domestic market requires a robust partnership, or rather effective "**brokerage**" between the state, importers and other economic and farm actors, with a judicious use of import allowances. At the same time, while large rice importers able to influence policy-making benefit from current commercial rice systems, these few actors may not be as powerful as one may think. Other actors, in particular producer organisations, "responsible" investors and importers and distributors of inputs and equipment for rice production and processing, may have an interest in promoting better market and trade regulation and could gain political weight. The formation of **coalitions** around a (sub-)regional reform agenda, or a problem resolution agenda, could enable these actors to advance this agenda. Furthermore, **political economy circumstances** are crucial for the success of reforms to be undertaken.

When governments come out of deep crises such as the 2008 food price shock, they can be prone to taking a more balanced stand on key policy issues such as food security and rural development, which can lead to more coherent policies.

Nonetheless, technical aspects do matter, especially if they create new economic opportunities and thereby induce political traction. The organisation of producers and intermediaries is a way to provide technical support to farmers and aggregate their products and would partially resolve the problem of the dispersion of small-scale rice growers over large areas. The development of networks of farm producers providing services to their members not only improves productivity and farm marketing, but it can also help improve quality and ease access to finance. It also helps disseminate new practices, such as contracts and innovative financing instruments, and build trust, which is critical for organising producers and integrating value chains. Emerging information technologies may facilitate the development of producers' networks and integration between different stages of the value chain, for example stock management and quality assurance. At the same time, as such networks develop, they may engage in coalitions for collective problem resolution and advocacy for enhanced market and trade regulation as part of a more comprehensive approach.

For reformist policy-makers, the challenge is to have a good understanding of both the technical aspects and the various interests involved in the value chain development process. That requires a more **multi-sectoral, integrated approach** than that taken so far in most West African countries where agriculture ministries have conducted rice strategies mostly on their own, in Ghana for example.

6.3.3. Climate change and coronavirus pandemic

Different external risks could affect the pathways to change outlined above. The **security situation** due to jihadism in the region, in Burkina, Mali, Niger, and with Boko-Haram in Nigeria, threatens a large population whose livelihoods depend on agriculture in general, and rice production in particular. Budget resources are more likely to be channelled to military expenditures at the expense of other needed investments in agriculture, education and health. The emerging climate crisis caused by anthropogenic greenhouse gas emissions is another major risk for the rice sector (as well as for security) in Africa and around the globe.

Current and foreseen impacts arising from climate change, as detailed previously (in section 3.4), are more frequent and intense drought, flood, heat or cold (depending on the regions) and soil problems such as high salt and iron toxicity (IRRI, 2018). Those environmental stresses strongly impact and constrain rice production, including in West Africa. A recent climate scenario analysis by Van Oort and Zwart (2017) estimates that by the year 2070 (compared with the baseline year 2000), irrigated rice yields in the rainy season in West Africa would decline by 21% or increase by 7%, without and with adaptation measures respectively.¹⁸⁷ In the dry season, **irrigated rice yields without adaptation would decline by 45%, while with adaptation they would decrease considerably less (15%)**. Moreover, according to the same study, the impacts of climate change (for the period 2000 – 2070) differ within and between

¹⁸⁷ There exist various technical options for adaptation in the rice sector, including the selection of appropriate planting dates, the selection and development of adequate rice varieties, the use of traditional varieties with high resilience and the breeding of new varieties with higher temperature tolerance, resistance to salinity, drought and floods, the system of rice intensification, rotation with different crops, integrated pest management, and so forth (Redfern, Azzu and Binamira, 2012). Adaptation options promoted by the Consultative Group for International Agricultural Research (CGIAR) include the selection of stress tolerant rice varieties and cropping systems, the Smart-valley approach and the Alternate Drying and Wetting (AWD). The Smart-valley approach, introduced in Benin and Togo in 2010, was designed to increase productivity in the context of climate change (Arouna and Akpa, 2019). Participating farmers achieved significant yield increase and felt less vulnerable to drought, flooding and crop failure (Dossou-Yovo, 2016). However, the Smart-valley approach cannot be applied in any rice production areas, only in inland valleys. The other practice promoted, the AWD (periodic drying and re-flooding of the rice fields), allows farmers to reduce their water use and their greenhouse gases emission (Richards and Sander, 2014). Nevertheless, it is also restricted to a particular type of rice production system, the irrigated lowlands.

irrigated and rainfed systems. In Burkina Faso, in the most extreme scenario,¹⁸⁸ projections show a 23% yield reduction in irrigated systems during the main season and a 48% fall in yields in the off-season. In rainfed lowland systems, yields would decrease by 34% and in rainfed upland systems by 32%. In Ghana, the same scenario shows reduced rice productivity, but to a lesser extent (minus 20, 36, 18 and 35% respectively). Lastly, Mali's irrigated systems would be hit hardest: 33% reduced yields during the main season, and up to 80% reduced yields during the off-season period, especially due to reduced carbon dioxide assimilation and higher temperatures (van Oort and Zwart, 2017). Another study, focused on Nigeria (Ajetomobi *et al.*, 2011), finds that an increase in temperature and precipitation will have a negative impact on dryland rice farms, reducing net revenue for farmers, while the opposite is likely to happen in irrigated rice farms. Clearly, there are large differences depending on the geographical location, production system, and farmer characteristics.

According to global trade scenarios, as developed by Porfirio *et al.* (2018), regardless of the carbon policy chosen, **in 2050 West Africa and the rest of the Sub-Saharan region will be the largest importers of rice** (as well as coarse grains, soybeans and wheat). The forecast continued increase in staple food imports is driven by the fact that the largest increase in human population by 2050 will occur in this region, with a significant increase in food demand. Latin America is expected to significantly increase its exports to all other regions, including West Africa and the rest of sub-Saharan Africa (FAO, 2018). As climate change is likely to negatively impact rice yields in various rice-producing regions in the world, including West Africa, Asia, Latin America as well as the US, **high import dependency on rice would leave the West African region even more vulnerable to international price shocks.**

The coronavirus pandemic erupting in early 2020 stirred rice markets. As in other sectors (medical and pharmaceutical products notably), the Covid-19 crisis disrupted international rice supply chains by hindering processing, logistics and transport. Worries about public health and the socio-economic consequences of the pandemic led some major rice exporters, including Vietnam, Cambodia and India, to temporarily restrict exports, which caused a rapid rise in international rice prices between late March and April 2020 (although no shortages were foreseen at the world level). Vietnam, an important supplier for many West African countries, resumed exports in May 2020. That led to a decline in prices although they remained higher than in 2019. **The rise in international prices in the first half of 2020 put upward pressure on paddy and milled rice prices in West African countries. That could have been a positive development for the West African rice sector, for farmers, traders and different types of millers.**

However, lockdown and state-of-emergency measures taken by public authorities to fight Covid-19 in West African countries have affected agricultural production and marketing (Kathiresan, Nagai and Haneishi, 2020; and Arouna *et al.*, 2020). Restrictions on the movement of persons and goods have hindered cross-border trade. Those measures may have also reduced people's ability to go to work in rice fields and mills. **Furthermore, given West African rice farmers' large dependence on urea and potash fertilisers imported from overseas (whereas phosphorus is imported only in modest quantities in West Africa), disruptions and delays in international supply chains and local distribution systems for fertilisers may have hindered rice farming.** Shortages in inputs for rice production (fertilisers, improved seeds and pesticides) would have increased costs, pushing paddy prices above-average levels and depressing output. That would have negative effects on local rice milling industries. The loss of earnings from agricultural, commodity and mining exports and tourism notably, due to the economic fallouts from the pandemic, have depressed disposable household incomes, affecting the demand for rice (although it is unclear whether the effect would have been more severe for locally produced rice or imported rice).

¹⁸⁸ Note that there exist a number of models for future climate change scenarios that are explained in detail in the 5th IPCC Report (2014). For instance, in a study by Egbendewe *et al.* (2017), a regional climate model for West Africa is used to predict temperature and precipitation from 2004 to 2100 with two representative concentration pathways (RCPs), namely RCP 4.5 which represents a medium level greenhouse gas forcing and RCP 8.5 which represents a high-level greenhouse gas forcing.

At the time of writing, it is difficult to assess the full impact of Covid-19 on West African rice value chains. **However, as seen in the analysis above, in situations where domestic and international rice prices go up, governments are more inclined to grant customs duty waivers to importers to push prices down in urban consumer markets.** In those situations, they may do so without rigorously assessing importation needs or transparently awarding duty-free import licenses. This tendency could be exacerbated by the scarcity of fiscal revenues and increased indebtedness due to the international economic crisis, whereas rice production relies on public support. Also, the West African electoral context in 2020 and early 2021, with five presidential elections (Côte d'Ivoire, Ghana, Guinea, Burkina Faso and Niger) to take place in the second half of 2020 and two (Benin and The Gambia) in early 2021, in the context of security crises in some of these countries, may incite political leaders to maintain rice prices relatively low. **Those practices could further disrupt domestic rice markets.** An indication that West African rice imports have remained strong in the Covid-19 period is that shipments to Africa have been steady and, in 2020, Asian exports to West African countries have shifted towards lower-priced, current-crop white and parboiled rice from India and old-crop white rice from India and China. At the same time, Thai exports to Benin and Cameroon have steeply decreased from 2019 to 2020, probably a result of the continued import ban in Nigeria, and possibly also a shift away from higher-priced Thai rice imports. Despite the ban, exports from Vietnam to West Africa have gone up (see FAO Rice Price Update of September 2020¹⁸⁹).

6.4. Concrete steps towards policy formulation and implementation

In what follows, we suggest a number of actions that can be taken by policy-makers, public administration officers and non-state actors to promote changes in rice policy-making in West African countries and regional organisations.

6.4.1. Analysis, strategic sectoral planning and monitoring

- Better integrate the issue of import regulation and intra-regional trade promotion in **national rice development strategies**, in the framework of the Regional Offensive for the Sustainable Revival of Rice Production in West Africa;
- Improve **statistics on extra-regional imports**, as well as on the paddy and milled rice **production and stocks**, with better use of existing statistical resources, such as databases on mirror trade flows, and by mobilising new information technologies for rice traceability (blockchain for example);
- Strengthen the **CILSS information system on intra-regional trade** (informal flows, road harassment and smuggling), as part of a market regulation system;
- Update, disaggregate and deepen **consumer demand data** (including the degree of substitution between different varieties), monitoring as close as what is done by businesses;
- Renew and systematise **cost measures for the production, processing, transport and distribution of locally produced rice** ("delivered prices"), and thus of competitiveness, which will also make it possible to better assess the impact of possible trade reforms, inform potential interprofessional networks for pricing agreements, and map potential complementarities within sub-regional basins;
- Mobilise and pool **domestic and international resources to finance the statistical and analytical rice systems perennially.**

6.4.2. Integrated policy-making and complementarity between national and regional levels

- Promote an **integrated, coherent approach** between trade, agriculture, industry, competition and other policy areas, for the development of rice value chains; the ECOWAS Trade Liberalisation Scheme (ETLS)

¹⁸⁹ Retrieved from <http://www.fao.org/economic/est/publications/rice-publications/the-fao-rice-price-update/en/>.

Task Force could take a focus on intra-regional rice trade; the ECOWAS Inter-Departmental Committee for Food and Agriculture could deepen the analysis of rice policies, elaborate options and help build consensus among different policy areas and stakeholders to better regulate imports as part of the Common Trade Policy of the Economic Community;

- Steer **trade and investment facilitation** programming towards opportunities in the rice sector (among others), so that cross-border "trade corridors" development processes and land use planning in the ECOWAS and WAEMU regions, such as the '**Growth Ring**' supported by Japan or the West Africa Trade Facilitation programme, reinforce the effectiveness of rice sector development policies, using **national trade facilitation committees** as coordination mechanisms;
- **Convene market regulatory authorities, customs, and officials from relevant ministries**, including trade and finance in the ECOWAS to regularly discuss issues related to rice imports and cross-border trade in locally produced rice;
- Adopt a **regional approach** in order to promote and coordinate key reforms of the rice sector in West African countries, considering the willingness of actors in different countries to **engage in coordinated sectoral reforms** and to **cooperate in cross-border areas**, to address specific problems and opportunities;
- Mobilise **international actors** to face the challenge of the West African rice sector, which is partly due to external factors (international trade statistics and regulation, experience sharing and others); African Union and ITC, UNCTAD and FAO trade statistics means could reinforce West African information systems and **traceability** implementation from loading ports to domestic consumer markets; coordination with initiatives in Asian exporting countries (for example, the Better Rice Initiative) could present synergies as higher quality exports to West African countries would be fairer competition with West African producers pursuing higher quality standards.

6.4.3. Participation and coordination among actors

The structuring and regulation of rice markets first rest on state intervention, but also on **the involvement, and the corporate responsibility, of the private sector**. This would include:

- **Multi-stakeholder dialogue frameworks**, strategic and operational, between states (central administration, technical departments and parliamentary committees), key economic operators in the imported and locally produced rice sectors (farmers organisations, traders, millers, importers, distributors, transporters, dockers, and so forth), and consumer groups;
- **Grouping of paddy and milled rice purchases** among private operators in the distribution sector, to reach an adequate scale to be competitive with the import sector;
- **Alliances between groups of agricultural producers, rice mills and distributors** to enhance vertical coordination and jointly promote a more enabling environment for local and regional rice value chains.

7. Concluding remarks

This study has provided new insights into rice trade dynamics in West African countries and the interactions between trade and local and regional value chains. **In the countries covered by the study, a notable trend is the continued rise in overseas rice imports in the 2010s, while at the same time domestic rice production was growing at a significant pace.** Rice import dependency ratios had started to decline following the adoption of CAADP and the support measures in favour of the agricultural sector that governments took in the aftermath of the 2008 crisis. Nonetheless, since then, several of these countries have become even more import-dependent than they were in the pre-2008 period. This trend is also reflected in the relative scarcity of locally produced quality paddy and rice observed at the level of rice mills and in retail markets. In contrast, imported rice is usually available in ample quantities, affordable, and of good quality. These dynamics have certainly been driven by structural social trends, particularly urbanisation and population growth. Yet, it also appears that policy choices played an important role.

In most countries, policies have promoted production effectively, but governments have not paid sufficient attention to the development of domestic markets for locally produced rice. In some West African countries rice yields compare well to international benchmarks. However, the efficiency of domestic rice processing and distribution is still too low, which undermines the quality-cost competitiveness of rice produced by local producers compared to the international market. Those policies are largely responsible for the weak productivity growth and value chain upgrading observed in most countries. **Nevertheless, our analysis suggests that trade policy choices have also constrained the development of the sector.**

Generally, tariff protection for the rice sector in West African countries is modest. It is also inadequately designed, as import tariffs are not well targeted at different types of rice products. **More importantly, the tariff policy is poorly effective due to various shortcomings.** In several cases, tariffs are not integrally applied. Customs duty waivers are frequent, hardly rule-based and often unpredictable. In some cases, import tariff exemptions are granted to importers in a non-transparent manner. Changes in tariff policy repeatedly occur in some countries, particularly in Nigeria, which disrupts the economic models of supply chains established under particular tariff regimes. Furthermore, in several countries, weak sanitary regulatory regimes let substandard rice enter the West African market. Thus, **importers benefit from various loopholes in trade policies and regulations, which results in unfair competition with domestic producers** and undermines the viability of investments made in productive capabilities (irrigation schemes, mills and so forth).

Differences in import tariffs and trade regulations between West African countries (between WAEMU and anglophone countries especially), as national policies predominate over regional trade agreements, result in large transshipment flows of rice, which is often smuggled. **The transshipment and smuggling of imported rice create strong interlinkages between domestic markets and thus between national trade policies directed at the rice sector.** In this context, the unilateral trade policies of a country regarding rice importation can destabilise the rice market in a neighbouring country, and thus the outcomes of rice policies in the latter.

Rice trade and market policies are implemented in that way for a reason. **Political elites, while wanting to support rice farmers, are also sensitive to the demand from low- and middle-income urban households, especially when rice prices go up and erode their purchasing power.** At the same time, lucrative urban consumption markets are dominated by a small number of rice importers and wholesalers that own or have privileged access to a good part of the storage and distribution facilities, thus largely controlling the supply chain. In that context, given the sizable rents that rice importation generates, they also exert influence on bureaucrats and political elites, at the national and sub-national levels. **Public actors, interested in obtaining part of those rents, have strong incentives to grant**

to them custom duty waivers or take measures to ease imports in other ways. The rise in imports typically observed in the periods preceding general elections is an illustration of those practices.

This situation has to be placed in the broader international context where rice producers in major rice-exporting countries are provided with sizable government support, which causes distortions in the world market. West Africa is an outlet for some of those countries' exportable rice surpluses and sometimes for old stocks to get rid of. Since the 2008 crisis, international rice supply chains have consolidated and become more vertically integrated, which has probably strengthened their competitiveness. The responsiveness of export markets and supply chains reduces the incentives for political elites to invest scarce public resources in the development of markets for locally produced rice.

The study has also yielded new information on cross-border trade in locally produced rice. **Although intra-regional trade is mainly informal, it also entails interlinkages between domestic markets within the region.** Various barriers to trade, including high transport and logistics costs, harassment and illegal payments along roads—despite the formal free trade area in ECOWAS—hinder the development of regional value chains between producing areas and consumer markets. Given their informal nature, cross-border trade flows of rice are essentially unregulated. As such, they might give rise to unfair trading practices between economic operators with different resources and access to political influence. More generally, uncoordinated national policies, in a context where all countries have a deficit in rice and compete for scarce supplies of paddy, may undermine the development of domestic markets and structured value chains as policy discrepancies induce informal trading activities. **But, again, the predominance of national agricultural and industrial policies, and the goal of national self-sufficiency in rice, stands in the way of policy coordination at the regional level.**

Nonetheless, the results of national policies after the 2008 crisis in terms of rice production are encouraging. In some countries, better-integrated value chains have emerged. **Although the situation might seem inextricable at first sight, there are examples of countries that have reformed market and trade policies in favour of the domestic rice sector.** In the past, several Asian countries succeeded in controlling rice imports and stabilising domestic markets, using trade and stockholding measures, in combination with policies to support rice production and marketing. More recently, the experience of Senegal, which involves a set of measures to strictly control rice imports and structure the domestic market, largely relying on the role of the private sector in procuring, storing, processing and distributing locally produced rice, shows that the interests of local producers and importers can align. In all these examples, the politics of the rice sectors is a crucial factor for the promotion of reforms.

This diagnosis points to the importance of better understanding the interests and incentives of different actors in the supply chain, within and between countries, to promote integrated policy reforms and investments. Vested interests working against the reform of rice trade are strong, including the legitimate concerns of policy-makers about populations' access to rice. The relevance and potential effectiveness of the proposed measures depend on contextual factors, given the structural differences across West African countries highlighted in the analysis above. **To be realistic, reforms to address the problems concerning current trade policies and regulations should be supported by a broad-enough range of public and private actors in favour of a change in rice trading and marketing systems,** at least in a group of leading countries in a major trade basin. In particular, any trade reform and initiative to structure and develop a regional market at the ECOWAS level has to pay attention to, and to the extent possible accommodate, the interests and incentives of Nigerian actors in the rice sector and sectors with interwoven interests. Côte d'Ivoire is another important factor in the regional rice trading system, in terms of consumption, production and trade. **Nigerian authorities' recent efforts to better control rice imports by land and the market turmoil caused by the coronavirus pandemic might be propitious circumstances for reassessing the interests of diverse actors.**

The reform process should be evidence-based and geared toward incremental and coordinated reforms. Reforms might be differentiated between countries, but they should share some common goals, to develop a regional market and avoid negative cross-border spillovers of national policies. Trade policy will probably have to be more fine-grained, using a broader range of instruments, possibly including a variable import levy, to stabilise prices in domestic and cross-border markets, and safeguard measures, to counter possible international dumping. At the ECOWAS level, the development of the Regional Food Security Reserve and mechanisms to manage risks regarding international cereal market access may present synergies with the reform of the rice sector. The reform process should also rely on actual or potential complementarities within the rice sector and between different cereal value chains. **The existing intra-regional trade in rice seeds, for example, may offer opportunities for regional cooperation in the rice sector that would help improve the competitiveness of the sector.** Similarly, opportunities to import and distribute intermediary and investment goods supporting regional agri-food value chains, including rice, could be harnessed to alter the incentives of networks smuggling rice.

The evolving context has implications for rice policy processes. Consumer preferences should be analysed in more detail as it is critical for the supply of locally produced rice to match the demand of urban consumers while considering ways of curbing the growth in rice consumption and developing alternative sources of carbohydrates. Policy-makers and private actors should better take into account climate change as it risks making the international market more volatile and also reducing productivity in producing areas in West Africa. **The challenge is to see the rice sector as a component of a much broader and complex, transboundary agri-food system, in which reforms have to solve trade-offs between promoting its competitiveness and employment potential, while also preserving access to the international market and diversifying domestic agri-food production and consumption.**

In the framework of the ECOWAP, it is recommended that the dialogue on rice production and trade policies be pursued and deepened, building on the outcomes of the Consultative Meeting on the ECOWAS Regional Offensive for the Sustainable Revival of Rice Production in West Africa in Abuja in February 2020. **It is crucial that the dialogue brings together trade policy actors, ministries of finance and market regulatory authorities alongside agricultural, food and environmental policy actors, to foster a more integrated and coherent approach to the rice sector. Robust institutional mechanisms would be instrumental in this approach.** The process should involve West African farmers, processors, importers, international traders, distributors, consumer organisations, banks and others to build a consensus on reform opportunities across a broad range of stakeholders. **The structuring and regulation of markets rest not only on state intervention but also on the involvement and the responsibility of the private sector.**

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In addition to structural support by ECDPM's institutional partners, The Netherlands, Belgium, Estonia, Finland, Ireland, Luxembourg, Sweden, Switzerland, Denmark and Austria, this publication was funded by the German government through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).



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ISSN1571-7577

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