

CTA
Working Paper
16/08

Opportunities for value chain finance in Africa's intra-regional food trade

Series: Value chain finance



Opportunities for value chain finance in Africa's intra-regional food trade



About CTA

The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food and nutritional security, increase prosperity and encourage sound natural resource management in ACP countries. It provides access to information and knowledge, facilitates policy dialogue and strengthens the capacity of agricultural and rural development institutions and communities.

CTA operates under the framework of the Cotonou Agreement and is funded by the EU.

For more information on CTA, visit www.cta.int

About AFRACA

The African Rural and Agricultural Credit Association (AFRACA) is a regional association of sub-Saharan financial and non-financial institutions involved in promoting rural and agricultural finance. AFRACA was established in 1977 alongside similar institutions across the globe as a lead advocate and coordinator of rural and agricultural finance in their respective regions. The AFRACA secretariat is based in Nairobi, Kenya where it was registered under the NGOs Coordination act in 1981 and received diplomatic status from the government of Kenya in 2003.

For more information on AFRACA, visit www.afraca.org

About CTA Working Papers

CTA's Working Papers present work in progress and preliminary findings and have not been formally peer reviewed. They are published to elicit comments and stimulate discussion. Any opinions expressed are those of the author(s) and do not necessarily reflect the opinions or policies of CTA, donor agencies or partners. All images remain the sole property of their source and may not be used for any purpose without written permission of the source.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. This license applies only to the text portion of this publication.

Please address comments on this Working Paper to Lamon Rutten (rutten@cta.int), Head, Policy, Markets and ICTs, at CTA.

Contents

Acronyms	vi
Acknowledgements	viii
Executive summary	ix
Introduction	1
Overview of Africa's food production, consumption & trade flows	2
Sub-Saharan Africa is a major food producer	2
Food dominates rural and urban household budgets	6
Africa is heavily dependent on food imports	6
Nigeria is Africa's single largest food importer	8
There is a thriving, mostly informal intra-regional food trade	9
Obstacles to intra-regional food trade	11
Africa's costs of trade are high	11
The quality of Africa's logistics infrastructure varies	13
Drivers of food supply and demand	14
There is large scope for the increase of African food production	14
Food consumption trends are largely driven by rapid urbanisation	15
Current consumption levels are constrained	16
The growing opportunities in short-distance value chains offset the relative difficulties in financing such chains	18
Value chain financing in Africa's agricultural & food sector	19
Intra-African trade finance is limited	19
Financing agricultural commodities is risky	20
Inventory finance is the starting point for most banks	23
Pre-export finance (PXF) is more risky	25
Working capital and overdrafts can be a substitute for trade finance	26
Trading houses are becoming 'shadow banks'	27
Africa's agricultural SMEs are struggling to raise financing	27
Recommendations to boost financing of Africa's food value chain	28
Building value chain financing	28
Mobile money transfer and mobile finance	30
Developing new trade corridors	31
Strengthening trade-support institutions	33
Regional industry bodies can improve conditions for regional trade finance	33
Commodity exchanges can comprehensively link physical and financial markets	34
African banks could finance more intra-regional food trade if they could outsource some of the management responsibilities	37
Credit risk management facilities for intra-African trade	39
Supporting government/donor instruments	40
Conclusion	41

List of Figures

Figure 1: Leading producers of grains, roots and tubers, 2012 ('000 tonnes).	3
Figure 2: Leading producers of cash crops, 2012 ('000 tonnes).	4
Figure 3: Rural versus urban consumption of food staples in Nigeria (kg per capita per year)	7
Figure 4: Selected food imports to SSA, US\$ millions, 2012	7
Figure 5: Formal and informal trade in foodstuffs, East Africa, January-June 2011	10
Figure 6: Trade blocks & bilateral trade deals	12
Figure 7: Current yield relative to potential yield	14
Figure 8: African urbanisation rates as % of total population	15
Figure 9: Value of sub-Saharan African food markets, US\$ billions	17
Figure 10: Change in urban household spending, US\$ millions, 2012 vs 2022	17
Figure 11: Africa agriculture revenue potential 2030 (US\$ billion)	19
Figure 12: A typical African maize flour value chain	22
Figure 13: MSME financing requirement in Sub-Saharan Africa, 2012	28
Figure 14: Business models for inclusive agricultural value chain financing	29
Figure 15: Proposed regional & coastal trade corridors	32
Figure 16: Possible structure of a pan-African collateral management agency.	38

List of tables

Table 1: Main roots and tubers produced in Africa (million tonnes, 2012)	2
Table 2: Africa's main agricultural produce in value terms (2012, US\$ billion, in constant 2004-2006 values)	5
Table 3: National food markets versus agricultural exports in selected West African countries	5
Table 4: Leading food importers in Africa, US\$ millions, 2002-12 (total).	8
Table 5: Cross-border trade indicators, 2014	12
Table 6: Ranking of selected African countries in Logistics Performance Index, 2014	13

List of Boxes

Cities versus rural areas – need for a balanced approach	16
Box 1: Schematic overview of possible anchors for financing intra-African food trade	20
Box 2: Inventory finance	24

Acronyms

ACE	Agricultural Commodity Exchange for Africa
AML	Anti-Money Laundering
AU	African Union
Bn	Billion
CAR	Central African Republic
CFA	Communautés Financières d'Afrique
CEMAC	Economic and Monetary Community of Central Africa
COMESA	Common Market for Eastern and Southern Africa
CTA	Technical Centre for Agricultural and Rural Cooperation
DfID	Department for International Development
DRC	Democratic Republic of Congo
EAC	East African Community
EAGC	Eastern African Grain Council
EAX	East African Exchange
ECOWAS	Economic Community of West African States
ECX	Ethiopian Commodity Exchange
EU	European Union
FAO	Food & Agriculture Organisation of the United Nations
FRICH	Food Retail Industry Challenge Fund
GDP	Gross Domestic Product
IFC	International Finance Corporation
ISO	International Sugar Organisation
ITC	International Trade Centre UNCTAD/WTO
KYC	Know Your Client
LC	Letter of Credit
LDC	Least Developed Countries
LPI	Logistics Performance Index

MENA	Middle East and North Africa
Mn	Million
MSME	Micro, Small and Medium Enterprises
NIRSAL	Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending
PXF	Pre-export financing
SADC	Southern African Development Community
SME	Small and Medium-Sized Enterprise
SSA	Sub-Saharan Africa
UEMOA	West African Economic and Monetary Union
UK	United Kingdom
UNDESA	United Nations Department of Economic and Social Affairs
UNECA	United Nations Economic Commission for Africa
USA	United States of America
WAGN	West African Grains Network
WRS	Warehouse Receipt System

Acknowledgements

This report, one of a series of CTA publications on agricultural value chain finance, builds on a paper prepared by Ecobank's Research Unit, under the responsibility of CTA and the African Rural and Agricultural Credit Association (AFRACA).

Executive summary

This brief paper explores the opportunities for African banks in financing intra-African food trade, in particular using value chain financing mechanisms (also called structured financing techniques). Value chain financing is used widely in the continent's agricultural trade, but mostly for exports to and imports from other parts of the world, not for intra-African trade. And most such value chain financing transactions are managed by international banks, with African banks having at best a supporting role. Apart from a relative lack of familiarity of value chain financing techniques among African bankers, their negative perceptions about the risk of agricultural financing also constrains the market, as does their lack of awareness of the large commercial opportunities in financing short-distance value chains (from farmers to cities in the country or neighbouring countries).

Sub-Saharan Africa is one of the world's largest and most diverse producers of agricultural goods, meeting a large proportion of its food needs from domestic production. Roots and tubers dominate agricultural production, the vast majority of which are traded and consumed within the region. Grain is also an important food crop, with substantial output of maize, sorghum, rice, millet and wheat. Sub-Saharan Africa is a major producer of cash crops, although most are exclusively exported to global markets. While cash crops have received most attention from financiers, their overall share in production is relatively low (Africa's coffee production, for example, is valued at one-sixth of maize production; and the value of cocoa produced is one-third that of cow milk).

But agricultural production falls far short of its potential (in no other region is the "yield gap" between the potential yield using best-in-class known technologies and actual yields as large as in Sub-Saharan Africa; and it possesses about 60% of the potentially available crop land in the world), and as a result, **Africa is heavily dependent on food imports, and these imports have been increasing**. Most of these imports have been from outside the region, although there also is a thriving intra-regional food trade. Huge volumes of rice, maize, flour, sugar and cooking oil are traded intra-regionally, redistributing surpluses to deficit areas (and in some cases, benefitting from differences in import tariffs by re-exporting goods bought on the world market). Most transactions are local, on a small scale and paid in cash, and many involve smuggling.

The high cost of trade and the quality of Africa's logistics infrastructure constitute the main obstacles to intra-regional food trade. There is the web of 14 conflicting regional trade blocks straddling the continent. But despite this, there are many problems with regional trade. The result is a very high cost of trading in Africa; for example, the cost of exporting and importing containers in Central Africa is more than three times the average cost of East Asia and Pacific. Africa scores lowest of all regions in the world in the World Bank's Logistics Performance Index (LPI) on all indicators relating to customs, shipping and tracking.

A surging rate of urbanisation is driving up Africa's food consumption. Urban sub-Saharan Africa's rate of urbanisation has risen from just 11.2% in 1950 to 36.7% in 2011 and is set to continue rising. Food remains the single most important household expense in sub-Saharan Africa. In tandem with urbanisation has been a shift in African consumption away from traditional grains and towards meat, dairy and fruit and vegetables, most of which must be imported. Per capita consumption of food remains highly constrained by the low purchasing power of many consumers and is set to surge in line with economic growth. The

impact of rising purchasing power will drive a tripling in expenditure on food over the next decade. This new demand presents a golden opportunity for producers, processors and traders across Africa – if they manage to expand their production and meet consumer’s quality criteria. For this, the constraints of the past – infrastructure constraints, poor irrigation, low fertiliser use, weak agricultural research and poor policies – need to be overcome.

Lack of financing is an overarching constraint for improving “short-distance value chains,” but in fact, changing conditions mean that it is also becoming a great opportunity for financiers.

Both international and African banks have been focusing on the traditional “long-distance value chains,” of cash crops being exported to developed countries and of rice being imported from Asia; but the dynamics of African development are such that they should reconsider this focus. In particular African banks will be well-placed to position themselves strategically to provide both trade and investment finance for short-distance value chains. To illustrate the potential: it is estimated that in 2030, the revenue potential for Africa’s horticultural sector will be US\$ 490 billion (plus US\$ 66 billion for processed fruits and vegetables), as compared to US\$ 129 billion for the traditional cash crops. Short-distance value chains are increasingly better organised, among other things because of the growing role of supermarkets in Africa, and even “informal trade” is becoming more formal to meet increasingly quality-conscious consumer demand. Banks should increasingly be able to adapt the techniques developed for financing cash crops for financing short-distance value chains.

The level of risk determines the level of financing available. As one moves further up the agricultural value chain and the risk increases, the proportion of financing tapers away. When dealing with trusted clients, banks can offer pre-export financing, which enables the farmer to purchase inputs such as fertiliser and pesticides prior to producing the crop. But in most cases, banks refuse to pre-finance at all, only joining the value chain once the goods have been deposited in a warehouse (with international banks often only coming in once the goods are in an export warehouse). Such inventory finance is popular with banks because there is no weather, crop, performance or quality risk; however, it requires high-quality warehousing, and in particular a reliable and efficient collateral manager to manage the goods in the warehouse on behalf of the bank.

In the current conditions, farmers and MSMEs are struggling to raise financing.

According to International Finance Corporation (IFC) estimates, sub-Saharan Africa’s SMEs have a financing gap of US\$80bn-100bn, a large proportion of which is in the agricultural sector. Furthermore, the gaps affect certain sectors more than others – in particular, there is very little finance available for intra-African food trade. If the African potential to increase its agricultural production is to be realised, African farmers need to be enabled to sell to consumers in the rapid-growing African cities – which means intra-African trade. This will then also counter the threat of rising food imports for the African balance of payments, which would otherwise constrict the continent’s future growth prospects. Increasingly better-organised value chains for intra-regional food trade can provide several anchors for such finance.

A key objective for all those keen on the sustainable development of Africa’s agricultural sector should be value chain financing: the creation of a vertically integrated and harmonious flow of commodities and money through the production chain, running from

the inputs to farmers at the start, through the traders and processors in the middle, to the off-takers and consumers at the end. Well-organised value chains reduce risks for all those involved in the chain, and thus, value chain finance is a relatively safe form of lending. African banks can help link different ends of the food value chain together, for example helping local retailers and distributors link up with suppliers in neighbouring countries.

Mobile money transfers and mobile finance improve the environment for regional food trade and food trade finance. Cross-border money transfer services are starting to emerge (by mid-2014, there were already 23 operator-led cross-border money transfer initiatives in Africa), driven among other things by the needs of informal traders.

New trade corridors can be a catalyst for facilitating the flow of agricultural goods from surplus to deficit regions. These corridors are planned to be arteries of Africa's intra-regional trade, and they could unlock the potential of intra-regional food trade, creating new routes for surpluses to transit the continent to where they are needed, and obviating the need for more expensive food imports from the international market.

Both intra-regional food trade and trade finance can be boosted by strengthening regional trade-support institutions. Regional industry bodies such as the Eastern African Grain Council, working in cooperation with governments, can develop arrangements for better contract enforcement, price information systems and common quality standards – efforts are underway to create a similar body in West Africa. Regional and sub-regional commodity exchanges can comprehensively link physical and financial markets – several initiatives are currently underway (and two small exchanges with a sub-regional focus are already operating from Malawi and Rwanda).

African banks could finance more intra-regional food trade if they could outsource some of the management responsibilities. Existing collateral management companies are mostly headquartered in Europe, and focus on the long-distance trade into and out of Africa. Just as banks in other parts of the world have done in the past, African banks could create a collateral management company to act as their agent in managing commodity trade flows, and in particular regional food trade. The potential benefits of such a new collateral management company include that it would give African banks the possibility to get a presence on the ground in another country where they do not have a branch of their own; and that it would give them access to a level of expertise on commodities, sectors and countries (other than their own) that they would otherwise find hard to afford.

Credit risk management facilities for intra-African trade can be improved. The leading credit risk insurance company in the continent, African Trade Insurance, only operates in 11 countries, and insures very little intra-African trade. Existing facilities that would permit African banks to lay off the risks of dealing with banks elsewhere in the continent are hardly used for this purpose. Factoring, which permits exporters and their banks to “sell” the risks of providing a credit to foreign buyer to an independent factoring company, is mostly absent from Africa. Much can be done to promote these various facilities.

Finally, governments and regional organisations, with support of the international community, can do much more to provide instruments that directly support the development of intra-regional food trade. At a comparable level of their economic progress, developed countries relied heavily on their central banks to boost the agricultural sector's access to

finance, for example with schemes to refinance warehouse receipt loans. Such schemes are now mostly absent from Africa, with the exception of Nigeria which has in recent years introduced a new scheme to stimulate agricultural value chain finance. But why not consider schemes to support intra-regional funding and guarantee schemes, for example to support partnerships along food product value chains so that African farmers can deliver new products in new ways to African supermarkets and food sector companies – western governments now provide such schemes for their supermarkets and food sector companies to buy from African farmers.

In conclusion, there is a lot of scope for improving intra-African food trade. African farmers have the capacity to improve their production to meet fast-growing urban demand, and only if they are empowered to realise this capacity will the trend of rising African food imports (which has the potential to cripple the continent's future growth) be reversed. For farmers to be able to supply urban consumers in their own and neighbouring countries with the quantity and quality of food that they will increasingly demand, well-organised value chains need to be created – as well organised as the current value chains from African farmers to consumers in developed countries. Many of the elements for this are falling in place, for example the growth of supermarkets in Africa and at least vocal support of the region's governments to improve the conditions for regional trade. Lack of access to finance can, however, frustrate the efforts of the private sector to build viable value chains. This, in turn, provides interesting opportunities for African banks. There are various anchors around which banks can structure loans for intra-regional food trade, and they can take a pro-active role in creating and strengthening such anchors – by bringing people together across borders, by creating a pan-African collateral management company, by supporting the creation and growth of (sub-)regional commodity exchanges. Governments and regional institutions, with the support of the donor community, can do more to encourage food sector operators and African banks to develop viable value chains for intra-regional food trade and its financing, including by creating dedicated re-financing and guarantee facilities.

Introduction

Despite being a major food producer, sub-Saharan Africa is highly dependent on food imports. The region imported US\$234 billion of food from 2002 to 2012, mostly cereals, fish, sugar and dairy products. Africa's cities will continue growing fast, and if current trends with respect to dependency on food imports for urban consumption continue, Africa's food import expenditures may triple over the next two decades, crippling its capacity to invest in infrastructure and manufacturing.

"In 2011, sub-Saharan Africa imported US\$43 billion worth of agricultural commodities, mostly staples which sub-Saharan Africa produces itself but in insufficient quantity, in spite of a natural advantage in terms of land and labour."

Claire Scheffnit-Chatterjee, Agricultural value chains in Sub-Saharan Africa – from a development challenge to a business opportunity, Deutsche Bank,

14 April 2014.

Africa can feed itself, earn billions, and avoid food crises by unblocking regional trade.

The World Bank,

Africa Can Help Feed Africa: Removing barriers to regional trade in food staples, 2012

Governments are trying to change the trend, through policy changes and investments in trade infrastructure.¹ This creates the potential for a rapid increase in intra-regional food trade flows. However, better policies for intra-regional food trade and better infrastructure are not enough: the "soft" conditions for such trade (eg, information about market opportunities, the ability for traders to safely enter into contracts with buyers or sellers in other countries, and the financing of regional food trade transactions) also need to be improved.

This last issue is the main theme of this report. As noted by UNECA/African Union, "in general, it seems easier to secure finance for Africa's trade with the outside world than for intra-African trade."² If efficient finance for intra-regional trade is not in place, the competitive position of African suppliers will be hurt; imagine for example a maize mill in Zambia, which has a choice between buying US maize on a 3-month credit (enough time to mill the maize and then sell the flour, even giving small credits to flour retailers), or Ugandan maize which needs to be paid cash. Banks currently have very little capacity to finance intra-African food trade flows. They need to build this capacity, which in turn will partly depend on the development of trade finance supporting institutions such as warehouse receipt systems, collateral management providers and commodity exchanges.

This report starts with a discussion of Africa's current food production, consumption and trade flows. This is followed by an analysis of trends and what these imply for future food trade finance opportunities. Then, current mechanisms for financing intra-African trade flows are discussed. The following chapter gives a series of recommendations, and a final section concludes.

¹ See UNECA/African Union, Boosting intra-African trade, January 23-30, Addis Ababa, Ethiopia

² UNECA/African Union, op.cit., 2012

Overview of Africa's food production, consumption & trade flows

Sub-Saharan Africa is a major food producer

Sub-Saharan Africa is one of the world's largest and most diverse producers of agricultural goods, meeting a large proportion of its food needs from domestic production. Roots and tubers are key staples of regional food consumption and dominate agricultural production, with output of 266.4 million (mn) tonnes in 2012, the vast majority of which is traded and consumed within the region. Cassava accounts for around 56% of roots and tubers production, and yams for 21%. Post-harvest losses are significant, estimated, in volume terms, at between 28% and 42% for cassava (which has to be processed almost immediately after harvest to avoid spoilage), 19% and 42% for yams, and 7% and 44% for sweet potatoes.³ In value terms, losses are even larger, with consumers discounting prices for roots and tubers by 11-63% for mould or insect damage.

Table 1: Main roots and tubers produced in Africa (million tonnes, 2012)

Crop/country	Production (million tones, 2012)
Cassava	149.5
Nigeria	54
Angola	15
Uganda	15
Yams	56.5
Nigeria	38
Ghana	6.6
Côte d'Ivoire	5.7

Source: FAOSTAT

Grain is another important food crop, with the region producing an estimated 61.4mn MT of maize, 20.6mn MT of sorghum, 20mn MT of paddy rice, 15.7mn MT of millet and 6.5mn MT of wheat in 2012. The region's 12 largest agricultural producers account for 85% of all maize, wheat and rice production, as well as well three-quarters of sorghum and a third of millet (Figure 1). Maize production is dominated by South Africa and Nigeria, but given the crop's importance as a staple food it is widely produced across the region. Angola, Nigeria and Ethiopia dominate sorghum production, while Nigeria, Madagascar, Mali and Tanzania dominate rice production. Wheat and millet are produced in small quantities, but rising levels of consumption are pushing up demand for both crops, boosting imports (particularly of

³ Hippolyte Affognon, Christopher Mutungi, Pascal Sanginga and Christian Borgemeister, Unpacking Postharvest Losses in Sub-Saharan Africa: A Meta-Analysis, World Development, Vol. 66, February 2015.

wheat). Post-harvest losses are significant, estimated at between 5% and 26% for both maize and rice, and further losses due to price discounts (e.g., 25-30% for insect-damaged maize).⁴

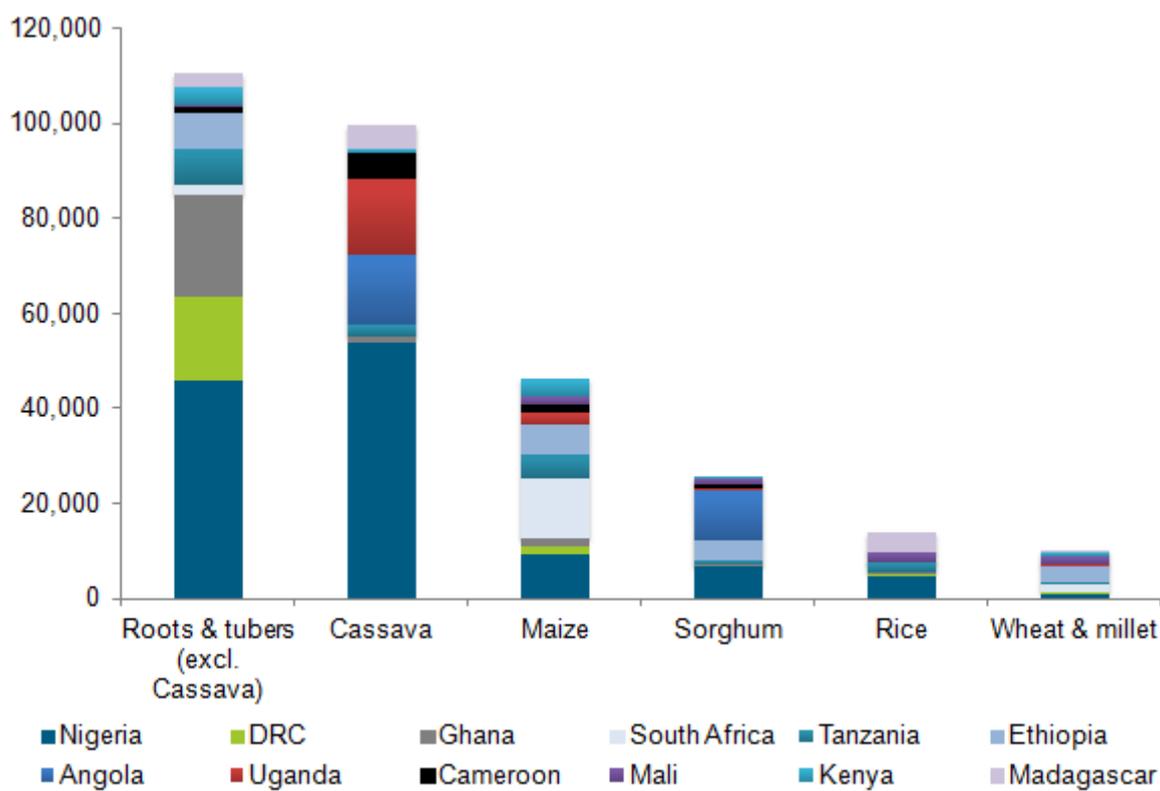


Figure 1: Leading producers of grains, roots and tubers, 2012 ('000 tonnes).

Sources: FAOSTAT, Ecobank Research
Other roots & tubers include potatoes and yams

Although less than 10% of African farmland is currently used for cash crops, sub-Saharan Africa is a major cash crop⁵ producer (see Figure 2). Most cash crops are exported to global markets. Traditional plantation crops (cashew, cocoa, coffee, cotton, etc.) still account for most cash crop production, but non-traditional crops like fruits, vegetables and flowers are rapidly growing in importance. There is also growing commercial farming of food crops such as pulses for exports (in particular from East Africa to India). Sugar – produced from sugarcane – is the single largest cash crop, with estimated production of 7.8mn MT in 2012/13. South Africa accounts for the lion’s share of production – 29.2% in 2012/13 – which is both consumed by the domestic food and bio-fuel sectors, as well as exported to global markets. Large sugar plantations can also be found across East and Southern Africa’s sugar belt. While not a large producer of sugarcane, Nigeria is a major sugar processor – refining raw sugar imported from Brazil. From most of these countries, large volumes of sugar are

⁴ Affognon et al., op. cit., 2015.

⁵ Food crops and cash crops do not represent pure categories, but rather a continuum, from foods grown for auto-consumption to foods grown partly or fully for sale to the local, national or global market, to non-foods grown exclusively for exports.

exported to the EU under preferential agreements⁶, and there is a thriving intra-regional sugar trade. Groundnuts and cashew nuts are an equally important cash crop, with Nigeria, Tanzania, Senegal and Cameroon leading production of the former, and Côte d'Ivoire the latter. Cocoa production is focused on West Africa, notably Côte d'Ivoire and Ghana. Coffee is mostly produced in East Africa, notably Ethiopia and Uganda, and tea in Kenya, which is the world's largest trader of the crop. All three crops are primarily produced for export, with little consumption within the region (the notable exception is Ethiopia which consumes over half of its coffee output).

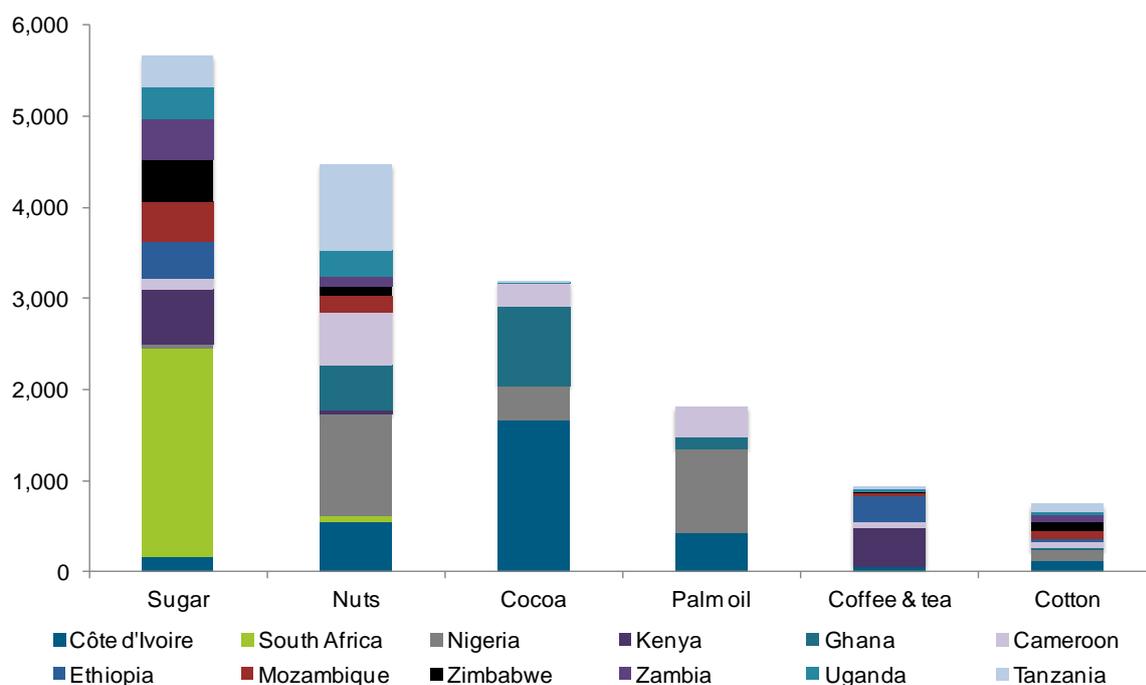


Figure 2: Leading producers of cash crops, 2012 ('000 tonnes).

Sources: FAOSTAT, Ecobank Research

Table 2 compares the production of foods with that of traditional cash crops, in value terms. It is worth noting that of the 10 main agricultural products produced in Africa (together accounting for more than half of the total value of the top-50 products), only rice and maize are in the list of commodities that are traditionally financed by banks. This may be linked to the misperception of banks that the other products are mostly produced for subsistence purposes, rather than for sale; in effect, all of these products have large urban markets, with scope for the organisation and financing of value chains. Table 3 further shows the importance of national food markets versus export markets in Africa (these data are quite old – in the absence of more recent ones – and the current picture is even more in favour of national markets).

⁶ The benefits of these preferential arrangements will largely disappear in the run-up to 2017, when sugar production quotas will be abolished in the EU. This is likely to lead to both lower prices and lower imports into the EU.

Table 2: Africa's main agricultural produce in value terms (2012, US\$ billion, in constant 2004-2006 values)

Product	Value (US\$ billion, constant 2004-06)
Cassava	15.6
Cattle meat	14.4
Yams	11.8
Cow milk	10.4
Rice	7.0
Tomatoes	6.6
Maize	6.6
Chicken meat	6.6
Plantains	5.0
Sheep meat	4.7
Cocoa	3.4
Sugar cane	3.0
Cotton	2.3
Coffee	1.1

Source: Data extracted from FAO's faostat website.

Table 3: National food markets versus agricultural exports in selected West African countries

Country	Year	National market	Exports
		(mln. US\$)	
Benin	2003	638	367
Cameroon	2007	2,810	1,165
Côte d'Ivoire	2002	2,200	3,303
Ghana	2006	4,591	2,341
Nigeria	2003	10,819	500
Senegal	2005	2,473	498
Togo	2006	678	205

Source: N. Bricas, C. Tchamda and M. Thirion, Consommation alimentaire en Afrique de l'Ouest et Centrale, Demeter 2014

Food dominates rural and urban household budgets

Food remains the single most important household expense in sub-Saharan Africa, despite wide variation between the budgets and consumption habits of rural and urban populations. For example, in Nigeria, food typically accounts for 71% of rural household expenditure, versus 54% for urban households.⁷ Urban dwellers have higher incomes but must buy most of their food, typically 90% of what they consume, versus 30% in rural households. Food dominates both rural and urban budgets, despite the fact that urban households spend 22% of their income on utilities (versus just 12% in rural areas), owing to the higher availability of services such as power, water and sewerage in urban areas.

While imported foods account for a larger share of urban food consumption, rural households have also become large consumers of imported foods – see for example Figure 3, showing that Nigeria's rural per capita rice consumption (of which almost 30% comes from imports⁸) is not far behind urban rice consumption. Almost all households buy meat, regardless of their income, but wealthier households tend to buy less grains and cereals – which are the cheapest foods – and instead buy more foods with high protein content, such as meat and dairy products, and sugary foods. Urban populations consume higher per capita volumes of fruit and vegetables, reflecting the role played by peri-urban rural communities which produce fruit and vegetables for the urban market. Canned foods are also more popular with higher income groups, while alcohol consumption rises in direct correlation with income levels.

Africa is heavily dependent on food imports

Despite being a major producer of agricultural commodities, sub-Saharan Africa is heavily dependent on food imports, particularly of cereals and fish.⁹ Africa lost its status as a net exporter of agricultural products in the early 1980s when commodity prices slumped and local production stagnated; in 2013 the value of agricultural exports from Thailand was greater than that of the whole of sub-Saharan Africa. Imports of key staples – rice, fish, wheat, sugar, flour, palm oil, dairy products and maize – surged to an estimated US\$25.2bn in 2012, representing 60% of the region's wheat and flour consumption, and 40% of its rice consumption (Figure 4). Food imports in the continent are relatively high in the region, and several countries are very vulnerable to global market developments; when rice and wheat prices reached record levels in 2007 and 2008, there were food riots in several countries.

⁷ These data are not exactly comparable, as rural households spend more of their incomes on imported or processed food, which is more costly, and produce much of their own grain and protein.

⁸ Imported rice is more expensive, but households prefer it because of the generally poor processing of locally produced rice.

⁹ In aggregate, African farmers produce 1,800 kilocalories (kcal) per day for each African citizen, well below the normal consumption of 2,000 to 2,500 kcal per day; the rest needs to be imported (Thom Achterbosch, Siemen van Berkum and Gerdien Meijerink, Cash crops and food security, LEI Wageningen UR, April 2014).

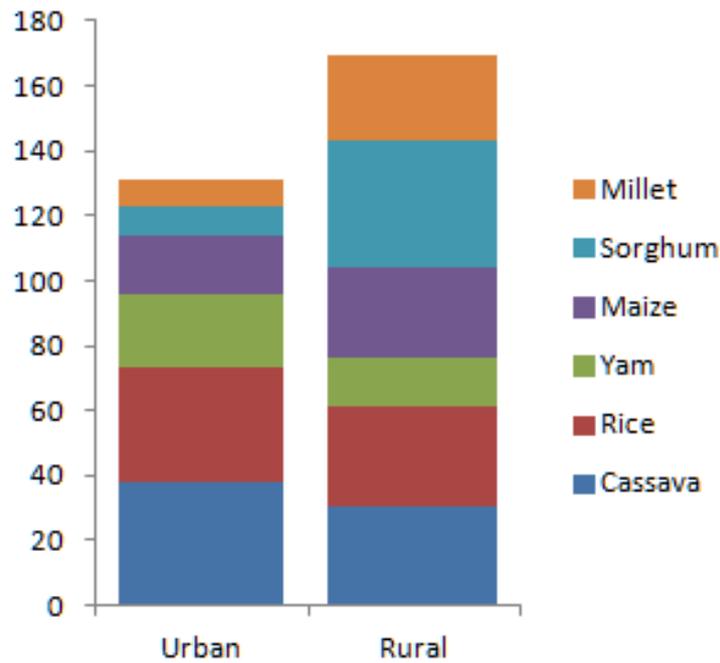


Figure 3: Rural versus urban consumption of food staples in Nigeria (kg per capita per year)

Source: O. Kuku-Shittu, Policy options for accelerated growth and competitiveness of the domestic rice economy in Nigeria, Africa Rice Congress, 21 October 2012.

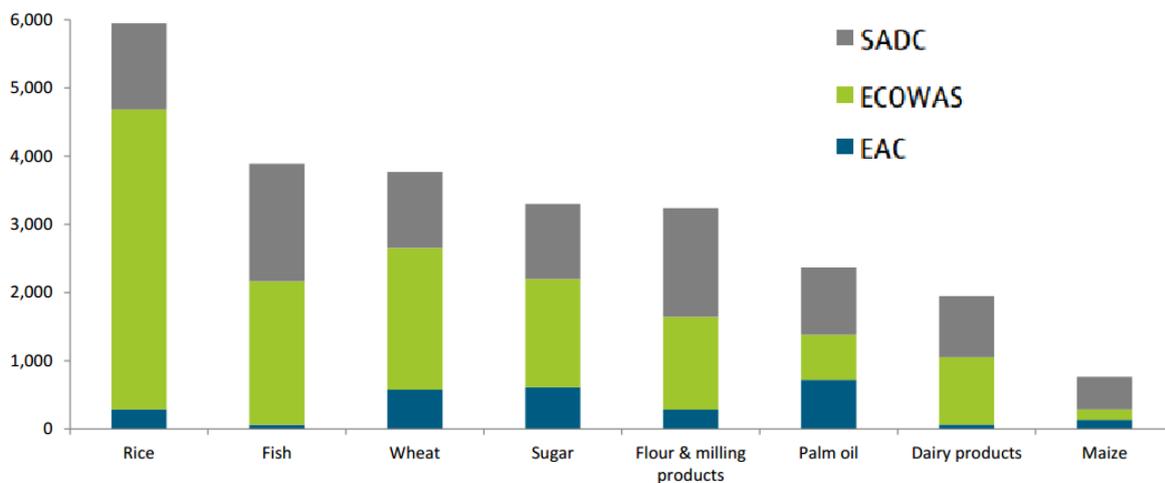


Figure 4: Selected food imports to SSA, US\$ millions, 2012

Sources: ITC, Ecobank Research

Rice is by far the largest import, led by West Africa whose consumers have developed a taste for aromatic varieties of rice from Thailand, Vietnam and India. Thanks to substantial flows of parboiled rice into Nigeria and broken rice (*'riz brisé'*) into Senegal, West Africa accounts for three-quarters of Africa's rice imports. The high volume of fish imports, worth US\$3.9bn in 2012, reflects rising consumption of protein and the general decline of the region's fishing fleet in the face of competition from European trawlers (fishing under licence) and illegal fishers from Asia. An estimated US\$3.8bn of wheat was imported in 2012, reflecting the crop's unsuitability for cultivation in tropical regions, with Nigeria accounting for most of West Africa's imports, nearly all of which came from the USA. There are also

substantial imports of raw sugar from Brazil and palm oil from South-East Asia, but relatively few imports of maize, reflecting the fact that maize is widely produced across Africa and is traded intra-regionally, with local production meeting most of the supply gaps.

Nigeria is Africa's single largest food importer

Africa's largest economies dominate imports of food, reflecting their large populations, high levels of urbanisation and rapid growth in purchasing power (Table 4). The region imported US\$234bn of food in the period 2002-12, primarily comprising cereals, fish, sugar and dairy products. North Africa accounted for US\$98.4bn of imports over this period – 42% of Africa's total food imports – led by Algeria and Egypt, which are heavily dependent on imports of wheat, rice & sugar. However, the single largest food importer is Nigeria, which in 2012 imported an estimated US\$6.3bn of food, mostly comprising rice (US\$1.9bn), wheat (US\$1.5bn), fish (US\$1.4bn) and dairy products (US\$483 mn).

Table 4: Leading food importers in Africa, US\$ millions, 2002-12 (total).

Country	Total food imports
Nigeria	35,655
Algeria	33,009
Egypt	29,277
Morocco	23,874
South Africa	10,518
Tunisia	8,147
Sudan	8,007
Kenya	7,687
Côte d'Ivoire	5,913
Senegal	5,177
Angola	4,637
Libya	4,109
Ghana	3,536
Cameroon	3,472
Tanzania	2,198
Other Africa	48,807
Total	234,024

Sources: ITC, Ecobank Research

South Africa is also a significant importer of food, importing US\$2.2bn in 2012, although large volumes of its imports are intended for processing (for example, into flour and sugar products) and eventual re-export to the sub-region. Many of Middle Africa's food importers also act as food re-export hubs, notably Sudan and Kenya which re-export large volumes of

foodstuffs to markets in East and Central Africa, and Côte d'Ivoire and Senegal which act as transit hubs for food flows across West Africa and into the landlocked Sahel.

There is a thriving, mostly informal intra-regional food trade

Intra-regional trade in developing Africa¹⁰ reached US\$ 130 billion in 2011. Its share of intra-regional trade in total trade is small compared to other regions – according to official data, exports to countries within the region accounted for 11% of total exports (on average from 2007 to 2011), as compared to 21% for Latin America and 50% for developing Asia.¹¹ Intra-African agricultural imports, on average from 2007 to 2011, were only US\$ 10 billion a year – with sugar as the lead product, followed by fish and tobacco. However, in terms of the direction of African agricultural exports, intra-regional trade is significant: approximately one-third of total agricultural exports is within the continent

However, official data on food flows reveal only a small part of the overall picture, as there is a vast network of intra-regional food flows which take place off the radar. Most of sub-Saharan Africa's cash crops are exported to the international market.¹² However, rice, maize, flour, sugar and cooking oil are traded on a large scale intra-regionally, redistributing surpluses to deficit areas, or in the form of re-exports to benefit from differences in import tariffs between countries. Many of these flows use long-established trade corridors which provide Africa's landlocked countries with access to the sea and by extension to global markets.

In West Africa, Dakar and Abidjan compete as the preferred point of entry for food imports to the Sahel, and several Sahelian countries (notably Burkina Faso and Mali) have their own independent port operations in both countries. Benin and Togo have long acted as offshore tax-free zones for their larger neighbours, Nigeria and Ghana, channelling vast quantities of rice, sugar, flour and cooking oil into these markets, many of these flows passing through illicit smuggling networks. Cameroon has long acted as the principal point of entry for foodstuffs going to Chad and the CAR, while in East Africa Kenya and Tanzania act as food trade hubs for the East and Central African regions. In Southern Africa Zambia is the key entry point for goods going into the southern DRC, while Rwanda and Burundi channel large informal food flows into Central Africa. One of Africa's largest food flows – but also one of the most secretive – is operated by the Somali trading community based in Nairobi's Eastleigh area (known as 'Little Mogadishu'). This community handles vast volumes of foodstuffs which are sourced from Asia and which flow through informal networks in southern Somalia, South Sudan and northern Kenya into and across East and Central Africa.

Given the informal nature of these flows – which avoid import tariffs and do not show up in official data – it is difficult to estimate the true size of Africa's intra-regional food trade. Many transactions – perhaps the majority – are on a small scale, paid in cash and take place from

¹⁰ I.e., Africa, except for South Africa.

¹¹ UNCTAD, Economic Development in Africa Report 2013 – Intra-African trade: unlocking private sector dynamism, United Nations 2013

¹² These flows are dominated by cocoa, coffee, tea, nuts, cotton and horticultural goods. Large volumes of maize are also exported by South Africa to the global market while the region's Least Developed Countries (LDCs) export sugar to the EU under preferential access.

farm to farm, village to village or via clandestine smuggling routes. Informal flows are critical to Africa’s food security, and they are likely to be at least as large as official flows, and could be larger. Figure 5 gives an example of the relevance of formal versus informal trade in foodstuffs.

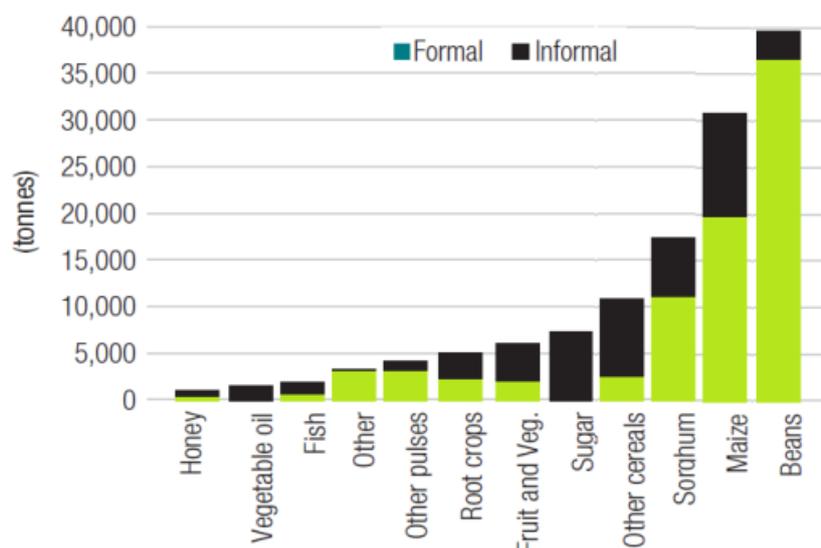


Figure 5: Formal and informal trade in foodstuffs, East Africa, January-June 2011

Source: East Africa Crossborder Trade Bulletin, FEWS Net. In the last quarter of the same year, of the 200,000 heads of cattle traded across borders in the region, over 85% were traded informally.

Unofficial flows can be effective at getting food to where it is needed. Across East and Southern Africa there is a thriving intra-regional trade in sugar and maize, redistributing surpluses from South Africa, Zambia, Tanzania and Uganda to deficit countries, such as Kenya and Zimbabwe. So effective has this trade become that Kenya – the region’s flour milling hub – sourced all of its maize from the sub-regional market in 2012. The estimated informal trade in staple food commodities in East Africa in 2013 was 3 million tonnes.¹³ But when these trade flows are disrupted the results can be striking. In late 2012 Zambian truck drivers went on strike in protest at the murder of a driver, and over 10 days more than 700 trucks built up at the border. This gives an indication of the scale of food flows crossing Africa’s inland borders, in addition to the volumes that cross Africa’s borders each day on bikes, carts and wheelbarrows.

Informal trade carries high transaction costs (in particular in the form of harassment of small scale traders, in majority women, by border officials), but the administrative burdens of formal trading (licences, tax registration) as well as customs duties and taxes still discourage traders from entering the formal sector. To encourage traders to enter into the formal sector (which, inter alia, would help to access trade finance), the World Bank has piloted a “Charter for Cross-Border Traders” in Malawi and Zambia.¹⁴

¹³ East Africa Crossborder trade bulletin, FEWS Net, January 2014.

¹⁴ Brenton, Paul; Dihel, Nora; Hoppe, Mombert; Soprano, Carmine. 2014. *Improving behavior at borders to promote trade formalization: the charter for cross-border traders*. Policy note; no. 41. Washington, DC; World Bank Group.

"[Given] the fixed costs of complying with formal sector procedures... in particular, small traders face highly regressive costs and have little choice but to trade informally. In this case they pay on average around 62% more per ton to move a ton of commodity across the border than large traders do – they would however pay almost double the current informal rate if they switched to the small formal route. In this sense, they are trapped in informality."

Paul Brenton et al.,

Improving behaviour at borders to promote trade formalization: The Charter for Cross-Border Traders

The World Bank, 2014

Obstacles to intra-regional food trade

Despite the high volume of food imports and the vibrancy of informal food flows, Africa's intra-regional food trade faces major obstacles. Principal among these are government policies and practices that discourage regional trade (for example, "in Tanzania, the use of export bans has left crops rotting in the fields, with substantial income loss for farmers"¹⁵), and a web of conflicting trade blocks straddling the continent which in effect are not doing enough to improve regional trading conditions. Africa has 14 regional trade blocks: 27 African countries are members of two, and 18 countries are members of three. The overlapping of SADC, COMESA and the EAC creates numerous conflicts over trade regulation, especially given the number of bilateral trade deals (Figure 6, marked with grey lines). Africa's 'spaghetti bowl' of trade deals has led to heavy speculation by traders as they play import duty arbitrage between different trade zones. For example, according to the Kenyan government, in late 2012 unscrupulous traders imported sugar duty-free to the EAC under an emergency COMESA quota responding to the drought in 2010-11 which severely affected crops in East Africa. They then re-bagged the sugar as coming from Uganda and Tanzania, and exported it duty-free to Kenya under the EAC free trade agreement, in the process avoiding import tariffs and VAT totalling 43% on the value of the sugar. There are numerous other instances of this kind of scam occurring, but while the region's import duty regime remains out of synch, traders will continue to probe the loopholes in the system to their advantage.

Africa's costs of trade are high

Another obstacle is the high cost of trading in Africa. According to data from the World Bank, the costs and time of doing business in Africa are higher than in any other region of the world (Table 5). Although the number of documents required to trade in Africa compares favourably with other emerging markets, the costs to export and import containers are significantly higher. For example, to export a container from a CEMAC country is more than three times the average cost to export one from East Asia and Pacific. The time to import goods to Africa is also worse than all other markets, indicating inadequate port and warehousing infrastructure.

¹⁵ World Bank, op.cit, 2013.

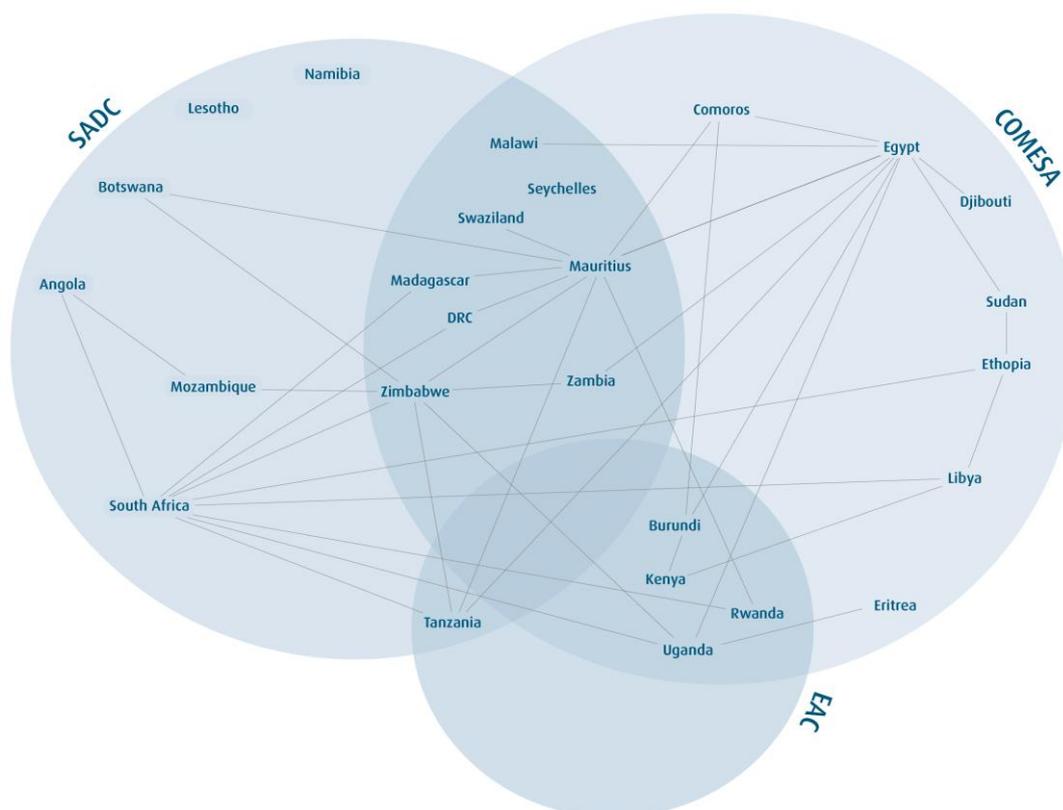


Figure 6: Trade blocks & bilateral trade deals

Source: Ecobank Research

Table 5: Cross-border trade indicators, 2014

	Documents to export	Time to export (days)	Cost to export (US\$ per container)	Documents to import	Time to import (days)	Cost to import (US\$ per container)
CEMAC	8.6	38.0	2,983.4	9.8	48.0	4,110.4
COMESA	7.3	30.5	2,187.4	8.5	35.1	2,807.2
ECOWAS	7.3	26.1	1,558.2	8.9	31.2	2,087.8
SADC	6.9	28.3	2,148.0	7.9	33.3	2,744.7
Sub-Saharan Africa	7.6	30.5	2,200.7	8.9	37.6	2,930.9
South Asia	8.1	33.4	1,922.9	9.4	34.4	2,117.8
Latin America & Caribbean	5.7	16.8	1,299.1	6.8	18.7	1,691.1
OECD high income	3.8	10.5	1,080.3	4.3	9.6	1,100.4

Source: CTA, calculated on the basis of World Bank data provided in <http://www.doingbusiness.org/data/exploretopics/trading-across-borders>

The quality of Africa's logistics infrastructure varies

But these data tell only half the story. The World Bank's LPI strips out the built-in advantages of the coastal countries, revealing where the real infrastructure problems lie (Table 6). Sub-Saharan Africa scores lowest of all regions in the world, on all indicators relating to customs, shipping and tracking. However, at a country level, the picture varies. South Africa stands out as Africa's top performer, reflecting its highly developed infrastructure, both internal and export-oriented. Côte d'Ivoire also scores reasonably well, reflecting the efficiency of its ports compared to its regional rivals, Dakar and Tema/Takoradi. 2014 or 2012 data for Uganda, a landlocked country which is dependent on its neighbours for imports of capital and consumer goods, are not available. However, in 2010 it was sub-Saharan Africa's second-best performing country (ranked 68th worldwide), with a score that was well above the average its EAC peers, Kenya and Tanzania, reflecting its more efficient customs and clearing procedures. The Single Customs Territory adopted by Kenya, Uganda and Rwanda in January 2014 has further strengthened Uganda's position: in the five months to November 2014, clearing time for a container from Mombasa and Kampala fell by 78%, and clearing costs by 49%.¹⁶ The other major trade hubs in West, Central and East Africa score marginally above the African average, indicating that they could perform better, given their geographical advantages and economic clout.

Table 6: Ranking of selected African countries in Logistics Performance Index, 2014

Country	Overall Rank	Customs	Infrastructure	International shipments	Logistics competence	Tracking & tracing	Timeliness
South Africa	34	42	38	25	24	41	33
Senegal	101	76	116	59	103	98	146
DRC	159	158	156	160	158	151	159
Tanzania	138	135	114	137	145	150	107
Kenya	74	151	102	50	90	60	45
Nigeria	75	117	83	107	85	51	57
Cameroon	142	156	154	147	104	111	120
Côte d'Ivoire	79	120	101	75	95	67	64
Ghana	100	130	70	93	121	73	113
Ethiopia	104	102	134	121	96	97	78
Mauritius	115	128	91	109	110	133	110
Zambia	123	86	115	152	114	120	105
Angola	112	114	140	84	128	103	96

Source: extracted from World Bank, <http://lpi.worldbank.org>

¹⁶ Stratlink Africa, Market Update – Africa, January 2015.

Drivers of food supply and demand

There is large scope for the increase of African food production

Agricultural growth in sub-Saharan Africa has been lagging behind that of Asia and Latin America. Two-thirds of the growth was the result of an expansion of acreage, the remainder came from yield improvements – again, Africa lagged behind in the latter (maize yields for example now stand at only 20% of their potential). Yield levels for most crops are much below those in other regions – and even with known technologies, there is a large scope for improving them (Figure 7). In addition, around 60% of the globally available uncultivated arable land can be found in sub-Saharan Africa. Poor irrigation, low fertiliser use, weak agricultural research, infrastructure constraints and poor policies all contribute to the poor performance.

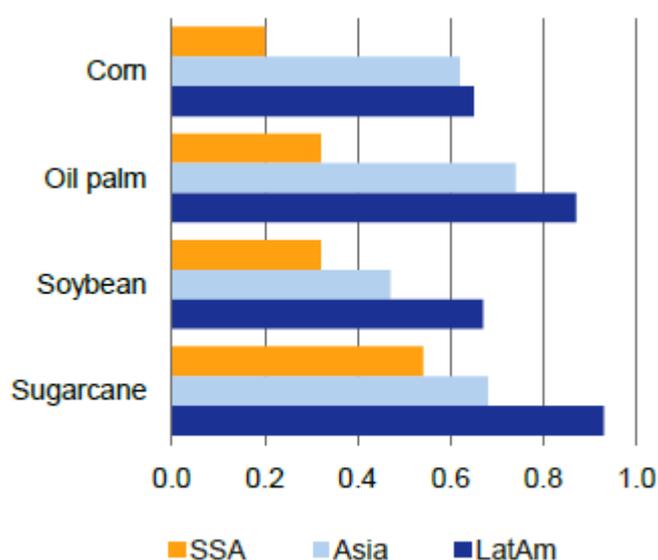


Figure 7: Current yield relative to potential yield

Source: World Bank, Deutsche Bank Research

Fertiliser use is only 13 kg per hectare, less than a tenth of that of the Euro area or South Asia.¹⁷ Property rights over much of the land remain unclear. Less than 5% of cultivated land is irrigated, compared with 44% in Asia. With more investments in agriculture and better policies it is likely that production can grow rapidly, enabling farmers to meet the rapid urban demand for foodstuffs, as long as sufficient investments are made in trade logistics and processing (including to reduce the currently very high post-harvest losses). According to McKinsey's, "if Africa could overcome these barriers – and some countries are creating credible plans to do so – we estimate that agricultural output could increase from \$280 billion per year today to as much as \$880 billion by 2030."¹⁸

¹⁷ Schaffnit-Chatterjee, op.cit.

¹⁸ Charles Roxburgh et al., Lions on the move: the progress and potential of African economies, McKinsey Global Institute, June 2010.

Food consumption trends are largely driven by rapid urbanisation

Africa's food consumption has risen strongly in recent years, driven by the surging rate of urbanisation. Urban populations typically consume more food – and imported food – than rural communities, so it is significant the rate at which Africa is urbanising. Sub-Saharan Africa's rate of urbanisation has risen from just 11.2% in 1950 to 36.7% in 2011 (Figure 8). By 2035, half of the population is likely to live in cities. West Africa is urbanising faster than any other region in Africa, owing to Nigeria which has several of Africa's largest and fastest growing cities, and a booming population. Lagos already has a population of 10 million people, and still among the world's fastest growing cities. Only East Africa lags the crowd, but its rate of urbanisation is forecast to pick up by 2040 when Tanzania is expected to become one of the most populous countries in Africa. Should current rates of urbanisation be maintained, 60% of Africa's food will be marketed by 2030, of which urban households will account for three-quarters, requiring a dramatic surge in food flows to meet this demand.

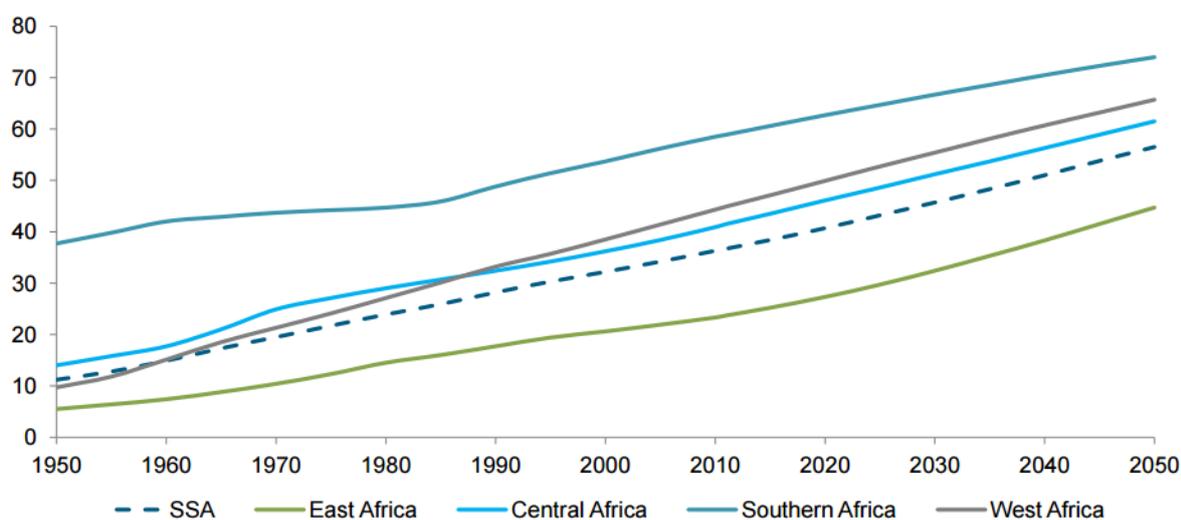


Figure 8: African urbanisation rates as % of total population

Source: UNDESA, World Population Prospects: The 2012 Revision.

In tandem with urbanisation, and partly driven by it, has been a change in African diets. Africa's urban population is shifting its consumption away from traditional grains and towards meat, dairy and fruit and vegetables, most of which are imported into Africa. The increasing popularity of western fast food is also driving up demand for bread-based and high-sugar products, which means increasing dependence on imports of wheat and sugar. And West Africans' appetite for aromatic Asian rice shows no signs of waning. Furthermore, more time-conscious urban populations demand more processed food (food preparations now form the fifth largest agricultural import into Africa). All of these factors will drive up food demand, which will need to be met by imports from the international or intra-regional market.

Cities versus rural areas – need for a balanced approach

Simulations suggest that urban agglomeration is an important source of long-term growth and structural transformation, but that investing in cities does not greatly reduce national poverty over the short term. In this regard, agricultural growth is more effective, albeit with slower national growth. Given these trade-offs, we conclude that the urbanization's benefits argue against an 'agro-fundamentalist' approach to African development, but the short-term imperative of reducing poverty necessitates further agricultural investment.

Paul Dorosh and James Thurlow,

Can Cities or Towns Drive African Development? Economy-wide Analysis for Ethiopia and Uganda, UNU/WIDER Working Paper No. 2012/50, May 2012

Current consumption levels are constrained

Currently, Africa has some of the world's lowest per capita levels of consumption of agricultural goods. This is the result of high domestic prices, which have restrained purchasing power, households' lack of disposable income and the poor availability of high-end food products (such as perishable fruit and vegetables, and meat) outside the main cities. For example, consumption of sugar and palm oil – both foods that are central to African diets – is relatively low, averaging just 14.5 kg and 7.8 kg per capita, respectively, in 2012, less than half of the world average. Kenya leads consumption for both commodities, at 21 kg of sugar and 11 kg of palm oil, but in other countries (including major sugar producers) consumption is constrained. If consumption levels could be brought up to Kenyan levels, the surge in demand would be extraordinary, considering the size of the populations in countries like Ethiopia and the DRC.

Looking to the future, consumption levels are certain to rise – in some countries at a dramatic rate. The impact of rising purchasing power – especially among Africa's rapidly urbanising population – will drive a tripling in expenditure on food from 2010 to 2013 (Figure 9). According to forecasts by McKinsey, Africa's middle class (which they define as households earning US\$1,000-5,000 per year) has surged from 39% of the population in 2005 to 55% in 2015. Moreover, households with incomes of US\$5,000-25,000 per year will rise to 9% of the population, substantially boosting disposable incomes. And of all the categories of expenditure, food will continue to take the largest share. The rise in food expenditure will occur despite an increase in spending on other consumer goods, notably clothing, footwear, textiles and apparel, hardware, furniture and mobile phones.

According to projections by Bank of America/Merrill Lynch, expenditure on food in Accra, Lagos and Nairobi will rise from US\$2bn in 2012 to US\$6.7bn in 2022 (Figure 10). Most of this increase will come from Nigeria, reflecting the expected rise in its urban population and increasingly western dietary habits.

At current trends, rising demand will lead to a massive growth in imports of cereals, sugar, palm oil, meat and especially processed food. This indicates that there are large opportunities for producers, processors and traders across Africa to substitute imports for locally produced and processed foods. Demand is also affected by the change in distribution channels, with urban consumers increasingly buying food products in supermarkets rather than from informal markets. Supermarkets, in turn, are motivated to set up well-organised value chains to ensure a continued supply of high-quality produce.

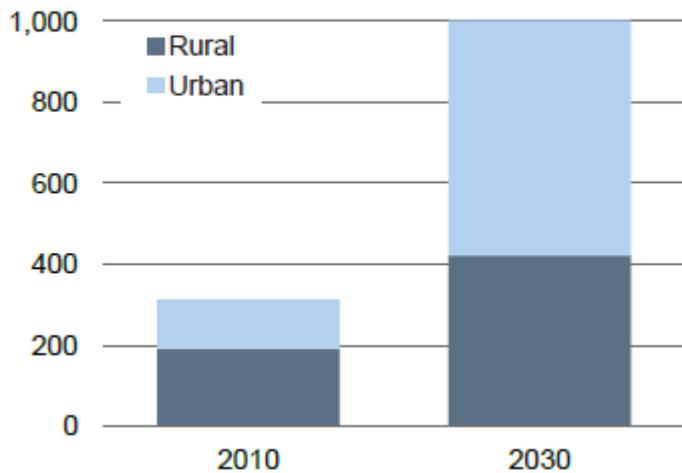


Figure 9: Value of sub-Saharan African food markets, US\$ billions

Source: Deutsche Bank Research

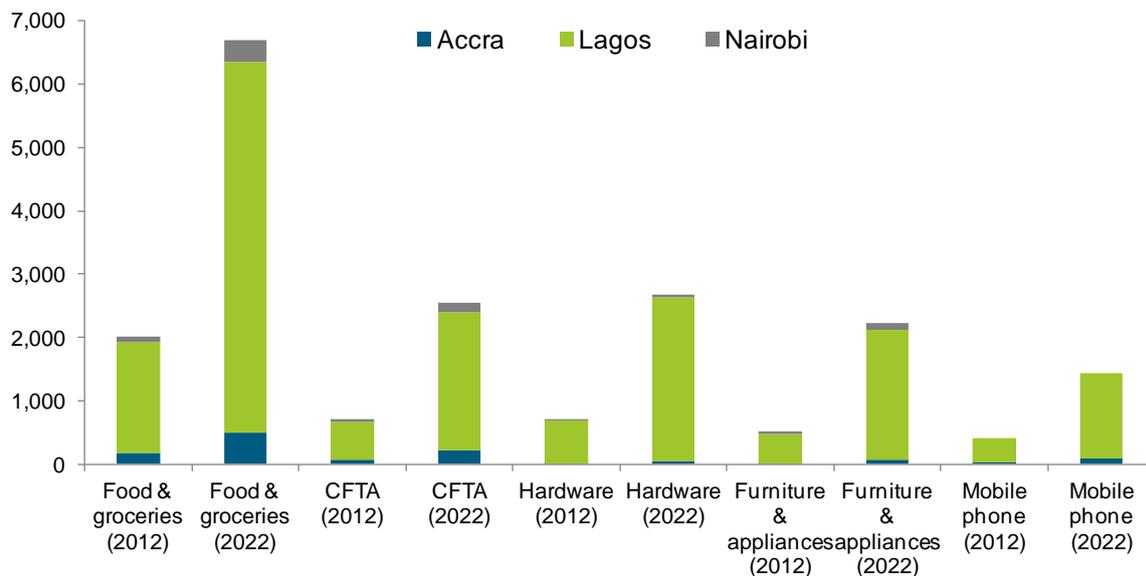


Figure 10: Change in urban household spending, US\$ millions, 2012 vs 2022

Source: Bank of America/Merrill Lynch

The trend is already changing. Intra-African trade in food products started increasing in the 2000s, and “intra-Africa trade in agrofood products is projected to more than double (+118%) between 2013 and 2030, due to substantial augmentation of intra-ECOWAS trade (+136%) and intra-COMESA trade (+146%). COMESA also shows a substantial projected increase in its agrofood exports to Africa as a whole.”¹⁹

¹⁹ Ousmane Badiane, Tsitsi Makombe and Godfrey Bahigwa (eds.), Promoting Agricultural Trade to Enhance Resiliences in Africa, ReSAKSS Annual Trends and Outlook Report 2013.

The growing opportunities in short-distance value chains offset the relative difficulties in financing such chains

Most bank financing for agricultural crops, whether by African or by international banks, is still for the products traded to and from Africa – for long-distance value chains. Even African banks prefer to finance these trade flows rather the short-term value chains that connect African farmers with their country's or their region's markets. But this misses the underlying trends in African agriculture.

There are a number of good reasons for the traditional focus on cash crop. Value chains for products such as cocoa, coffee or cotton tend to be well-established. Those active in the chain often have long track records and long-standing relations with their suppliers, clients, financiers and other service providers. Furthermore, the flows are regular – each year crops pass from producing areas through processors and warehouses, from upcountry areas to ports. The regularity, in turn, reduces the risk of investing in value chain infrastructure such as warehouses, packaging plants or quality grading laboratories. In contrast, the flows of grains and other commodities that are sold by farmers to cities are much less regular and predictable: farmers who one year produce a surplus may have a deficit the next year. The actors in these chains tend to be less-well organised. But this is changing.

Most urban consumers in Africa will soon reach middle class income level, with considerable discretionary spending power and keen to upgrade the quality of their food.²⁰ Figure 11 shows the likely impact on the potential revenues for African farmers (for the potential to be fully realised, existing bottlenecks to growth need to be removed). The largest potential is in horticultural products – almost quadruple that of the cash crops on which most banks now focus. Horticultural trade needs strong, well-organised value chains (even more than in other agri-value chains, most of the value added is in between the producer and the consumer). Sophisticated logistics are needed, as well as good packaging, specialised transport and cold storage facilities. Moreover, concerned about the quality and safety of their food, urban consumers will buy more from supermarkets²¹, and more branded products. There are also significant moves to better organise the “street trade” in food in African cities.

Supermarkets are trying to build direct links with smallholders, although they often find it difficult to upgrade their production practices to meet the supermarket's high standards. “In Kenya, for instance, supermarkets are already buying three times more produce from local farmers than Kenya exports to the rest of the world.”²² Such supermarket-driven chains can be readily financed using the same techniques that so far have been used for financing cash crops.

African banks may thus do well to position themselves to finance the increasingly better organised and fast-growing short-distance agri-value chains in the continent.

²⁰ McKinsey Global Institute, *Lions on the move: the progress and potential of African economies*, June 2010.

²¹ Many new shopping malls are being built throughout Africa, and supermarkets are generally sought after as anchor clients. This is one reason for their rapid growth. See African Center for Economic Transformation, *The Changing Market Place: the Rise of Supermarkets in West Africa*, West Africa Trends, Issue 6, 2013.

²² *Idem*.

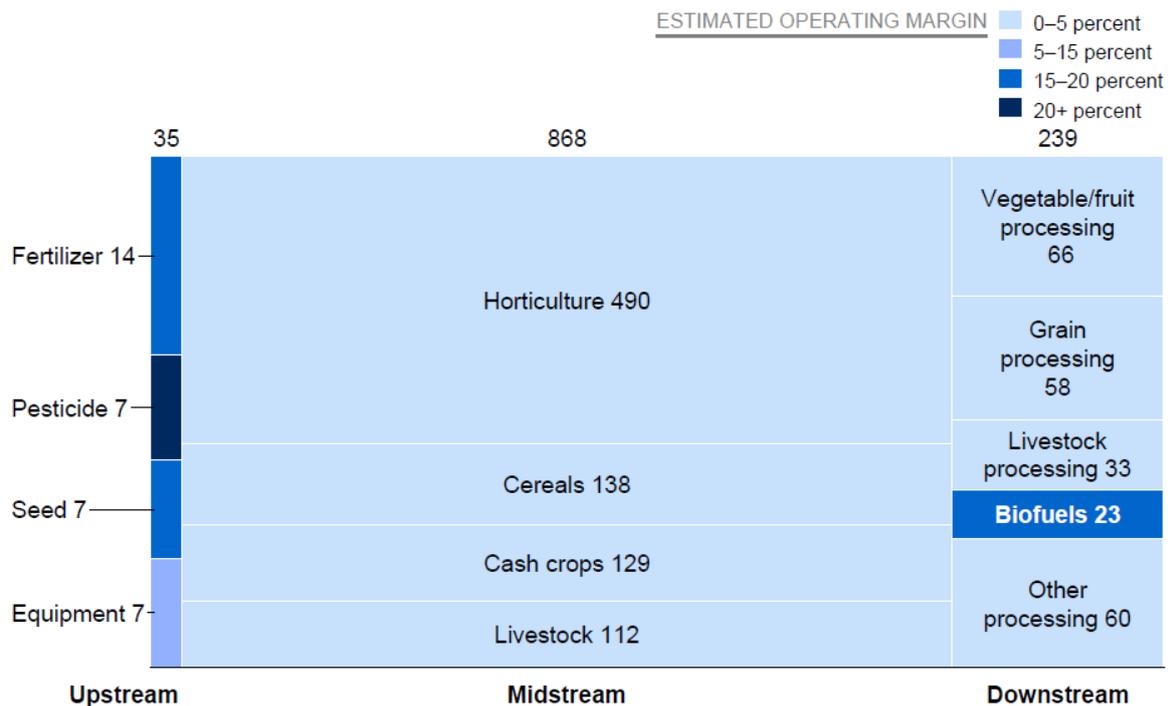


Figure 11: Africa agriculture revenue potential 2030 (US\$ billion)

Source: McKinsey Global Institute, 2010

Value chain financing in Africa’s agricultural & food sector

Intra-African trade finance is limited

“Intra-regional trade in Africa is generally constrained by poorly developed financial markets and lack of widely available trade finance for African businesses.”²³ A handful of development banks tries to promote such finance – in particular, the African Development Bank, African Export-Import Bank and to some extent, Ecobank in the whole of Africa, the PTA Bank in the COMESA region, the East African Development Bank in East Africa. In the COMESA region, there has also been a trade insurance agency since 2001, providing political risk cover to African exporters, including for regional trade. However, by and large the efforts of these institutions have mostly bypassed food trade – instead, the focus has been on telecommunications, manufacturing, services, energy and mining.

A major constraint on the growth of Africa’s trade, especially intra-regional trade, is the inadequacy of financing mechanisms. The continent’s financial landscape is characterized by multiplicity of inconvertible currencies, and the underdevelopment of regional institutions that can provide finance, credit and guarantee for cross-border trade. In general, it seems easier to secure finance for Africa’s trade with the outside world than for intra-African trade.

African Union

Action Plan for Boosting Intra-African Trade, 2012

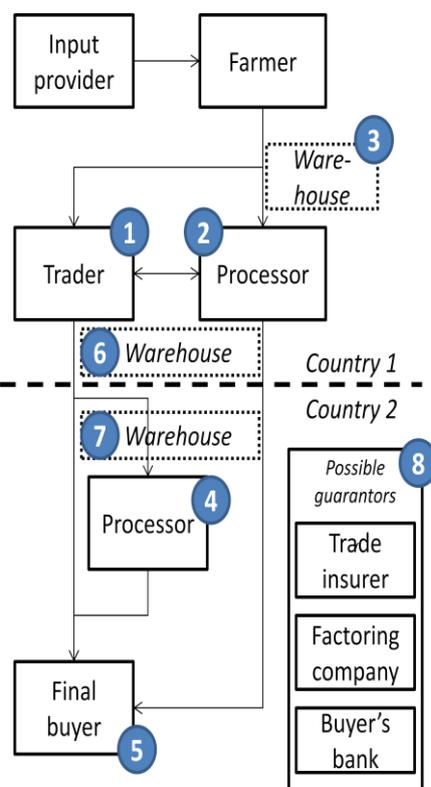
²³ UNECA/AU, op.cit., 2012

Financing agricultural commodities is risky

Africa's food flows involve a huge cast of players – from growers and traders to processors and offtakers – all of whom have differing but interconnected financing needs. Box 1 gives an overview on how banks (and some other financiers such as investment funds and factoring companies) can anchor regional food trade finance on the relative strengths of these players, and the warehouses through which their flow of goods pass.

Box 1: Schematic overview of possible anchors for financing intra-African food trade

In order to mitigate risks, financiers will normally anchor their financing in one or more of the stronger links in the value chain. In the case of intra-African food trade, and can conceive several such links, depending on the conditions of the country, the particularities of the commodity, and the strengths and weaknesses of the value chain participants as well as of supporting entities such as banks.



The export will normally be reflected in a contract between a trader (1) or processor (2) in country 1, on the one hand, and a trader (for reasons of simplification, left out of the chart to the left), processor (4) or final buyer (5) (for example, the World Food Programme, or a supermarket) in country 2. It is possible that on the basis of the reputation of the seller in country 1 combined with that of the seller in country 2, a bank in country 1 is willing to pre-finance the exporter. If the bank has a lot of confidence, it could finance the whole domestic value chain, permitting the exporter for example to pre-finance the provision of inputs to farmers. If it has somewhat less confidence, its finance can be triggered by the goods covered in the export contract being delivered by the farmers into an upcountry warehouse (3), independently controlled by an agent of the bank (a collateral manager). If it has little confidence in the exporter, the bank's financing may come even at a later stage, once the goods are delivered into an export warehouse (6). If the buyer in country 2 has a good reputation, then a bank in country 2 or even, any international bank may also be willing to fund this inventory.

If the buyer's bank in country 2 has access to cheaper funding, or if it simply understands more of the value chain and the risks involved, then the buyer's bank may fund the value chain in country 1. It would normally do this indirectly, by providing a credit to the importer (the trader, processor or final buyer) which in turn uses these funds to make a pre-payment to the exporter. The bank may share in the risks of non-delivery with its client (ie, if the exporter does not deliver, the importer does not have to reimburse the bank, or not fully). These risks can, in turn, be covered on the trade insurance market (in particular those risks that are linked to political interventions, such as an export ban on maize) – such insurance is provided by the African Trade Insurance Agency. Depending on its confidence in the exporter and its supply chain, the bank could incorporate a trigger clause for the financing, for example that it can only be made available against goods delivered into an accepted warehouse (a common instrument is the so-called “green clause letter of credit”).

If the buyer in country 2 does not have a good reputation, or if country 2 is considered risky (for example, the government may intervene in the ultimate payment for the delivery), then the regional trade financing would be anchored differently. One possibility is that a bank in country 1, 2 or even a third country relies on a third-party guarantor (8) to ensure that the goods, once delivered, will be paid for. The simplest but not necessarily cheapest way is to have a letter of credit issued by the buyer's bank, which stipulates that once the exporter has sent the documents set out in the letter of credit (such as a bill of lading and a quality certificate), the bank pays, either at once or with a certain delay (of possibly up to 180 days). On the basis of its trust in the buyer's bank, the seller's bank may then be willing to pre-finance the export transaction. If the seller's bank does not trust the buyer's bank, it can get a guarantee from a third (international) bank, or even, from the IFC.

Alternatively, the exporter can agree with a factoring company (in any country) that once it has all the required export documentation, it will deliver the documents and in return, get a (discounted) payment; the factoring company is responsible for collecting the payment from the buyer. Or it can buy insurance on the risk of the buyer's non-payment – full credit insurance, or just coverage on the risk that the government of country somehow makes payment impossible (for example by imposing currency controls). Or finally (in the “secured distribution” structure that is very common for imports into Africa of products like fertilisers, petroleum products or rice), it can use a construction where it places the goods in a bonded warehouse in the buyer's country (7), where the inventory is controlled by its bank until the goods are paid for, cash.

Financing agricultural commodities is risky, as they have an intrinsically low value when compared with minerals (such as metal ores or gold) and therefore need to be traded in high volumes – with low margins – in order to make a profit. This result in large-sized deals, which can bankrupt a trader if a single deal goes wrong, whether as the result of crop deterioration, non-performance by the farmer, port congestion, local gluts or non-payment from buyers or offtakers. In Africa's agricultural sector traditional value chain financing is widespread, involving spot market transactions and a large number of small retailers and producers. But there are also modern value chains that are vertically integrated, controlling the agricultural commodity “from farm to fork.” Financing can be both internal – for example, when an input supplier provides credit to a farmer – or external, involving domestic and international banks. But to understand the kind of financing a bank offers each of the players in the value chain, one must understand how a bank views the risks running through it.

Figure 12 shows a typical agricultural value chain, producing maize flour for export. At the start of the season the maize is harvested, processed into flour and stored in a warehouse, before being transported through a series of warehouses to its final market, which could be an offtaker (such as a bakery) or a retailer. Dozens of risks impact the flow of the commodity through the value chain, but there are seven principal ones which must be identified and, where possible, mitigated. At the start of the value chain, before the maize has been produced, there is country risk (the risk of a political upheaval disrupting the marketing of the crop), crop risk (the risk that no maize will be produced as a result of poor weather or pest infestation) and producer risk (the risk that the farmer will not perform and fail to plant or harvest the maize as promised). Moving further down the chain to the warehouse, a number of other risks arise. These include quality risk (is the maize of the right quality to meet the offtaker contract, and is it being stored properly), logistics risk (can the maize be moved between warehouses easily) and warehousing risk (is the warehouse properly run in terms of security and quality control). And at the end of the chain, and gradually rising throughout it, is credit risk: will the bank get repaid?

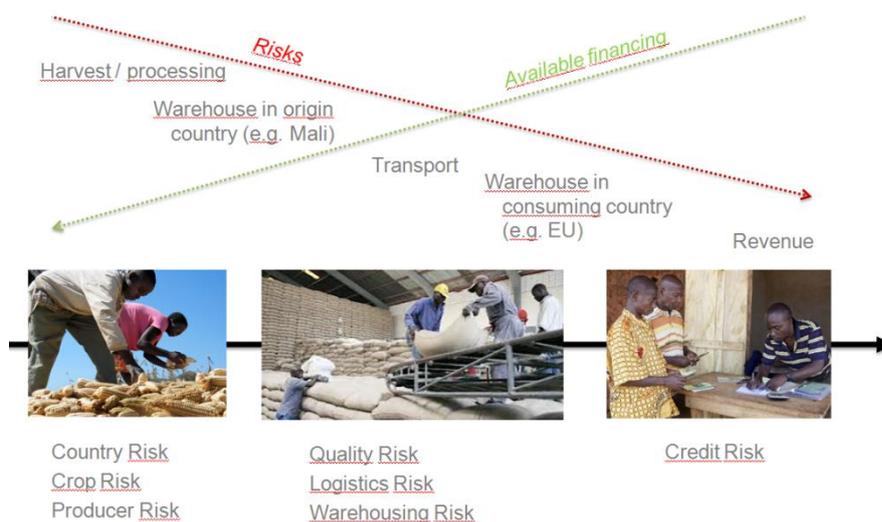


Figure 12: A typical African maize flour value chain

Source: Ecobank Research

The level of risk determines the level of financing available. For example, if a bank is asked to finance a shipment of maize or flour, which has already been bagged, graded and deposited in a secure warehouse, it might finance 100% of its value, secure in the knowledge that the trader can make the margin he needs to turn a profit. But as the bank moves further up the value chain and the risk increases, the proportion of financing tapers away. As result, more financing is available for maize stored in a bonded warehouse at an international port than in a locally-owned warehouse upcountry. In a bonded warehouse, where the only obstacle between the bank and the final price is the payment of export tax, should the client default the bank can sell the maize on the international market; whereas in an upcountry warehouse, the bank must also factor in transport, quality and country risk.

When pre-financing the crop itself, banks tend to finance up to a maximum of 25% of its total value, although this proportion can be higher for the bank's most trusted clients. Some banks refuse to pre-finance at all, only joining the value chain once the commodities have been

produced and deposited in a warehouse, with a known quantity and quality. As a result, the majority of international banks, such as HSBC and JP Morgan, tend to be involved at the far end of Africa's agricultural value chain, while local banks, such as Ecobank, tend to be involved at the start of the chain, financing farmers and cooperatives, with some cross-over in the middle.

Inventory finance is the starting point for most banks

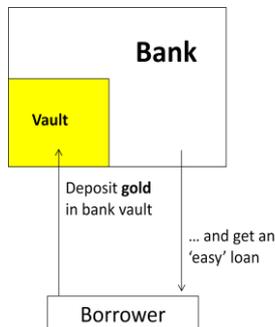
The most common form of soft commodity financing in Africa is inventory finance (also called warehouse receipt finance), i.e. financing the crop once it has been deposited in a warehouse (often, as noted in Box 1, a bonded warehouse in a port, managed by an independent collateral manager who guarantees to the bank the continued presence of the goods). Box 2 explains the concept. Inventory finance is popular with banks because there is no weather, crop or performance risk, and any stocks considered for financing will have been graded – so there is no quality risk. In a typical inventory financing model for an exporter of maize, the exporter deposits the maize in the warehouse, which issues a warehouse receipt to the bank, giving it title over (but not ownership of) the goods. The bank then finances the exporter against this collateral. Once the maize is sold, the buyer pays into an account controlled by the bank; the bank deducts its loan plus interest, and also the warehousing charges due to be paid by the exporter to the warehouse, and pays the remainder to the exporter. This way the exporter can receive payment for his maize long before it has been sold to the buyer, freeing up financing for further purchases, or, say, to finance the import of inputs.

The safest starting point for inventory finance is a warehouse in a port. This carries minimal risk, as it is relatively easy to extract the bank from the transaction without serious loss, and for this reason warehouse inventory finance is popular with international banks. The lowest risk is a warehouse in a European port, but banks also finance produce in bonded warehouses in African ports and even in warehouses upcountry. For inventory finance to function properly the quality of the warehouse is critical, in particular the reliability and efficiency of the collateral manager and the ease of moving the goods from the warehouse onto the ship for export.

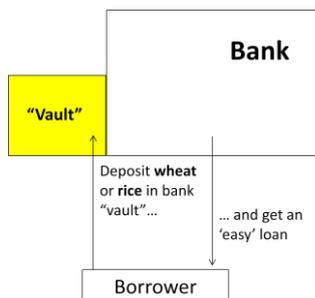
Local banks tend to be more involved in inventory finance upcountry, as they know the clients and the country and, as a result, have lower country and counterparty risk. But for most banks it can prove too complicated to put together financing for small producers near the start of the value chain. Indeed, many will not consider deals worth less than US\$10 mn, as smaller ticket deals cannot justify the time and expense of complying with Know Your Client (KYC) and Anti-Money Laundering (AML) regulations. Ultimately the inventory finance model requires the farmer to carry crop risk, with financing only available once the goods have arrived at the warehouse and been graded and stored. For this reason, Africa's smallholders struggle to raise financing to buy inputs.

Box 2: Inventory finance

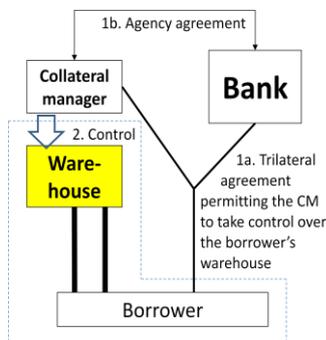
The concept can be understood as the adaptation of a financier's old practice to provide finance against tangible collateral which he can put in its vault.



In order to accept bulk commodities as collateral, banks may accept an "outside vault," a warehouse.



The bank can use an existing public warehouse with a reputable manager (e.g., a port warehouse), but may instead of bringing the goods to a controlled warehouse decide to bring the warehouse controller to the goods. So warehouse receipt finance may well be for inventory in a warehouse that is on the premises of the borrower, controlled by a specialist collateral manager.



Particular problems of warehouse receipt finance for grains

The most successful inventory finance scheme in Africa is for grains: South Africa's Electronic Silo Certificates system, set up by the country's cooperatives, traders, processors and banks. However elsewhere, grain warehouse receipt systems have been difficult to develop. The reasons include the following:

- Africa's grain markets tend to be largely informal and poorly integrated (making it difficult for a bank to know at what price it will be able to sell in case of a default by the borrower).
- Farmers are rarely organised in groups that can generate high grain volumes, resulting in relatively high transaction costs.
- Quality control systems for grains tend to be much less developed than for export crops, causing storage risks due to high moisture levels, as well as price uncertainty.
- Overall, handling and storage practices in the African grain sector are poor, at all levels of the value chain, and much awareness-raising and training is needed to create better quality-awareness.
- If grains are stolen from a warehouse, they are easily sold through local markets, whereas export crops can often be successfully recovered.
- Governments at times intervene in grain markets, causing large price falls and high losses for those who own grain inventories.

There have been multiple efforts supported by international development agencies over the years to promote inventory finance in Africa, mostly focused on agricultural exports to the international market (cashew, cocoa, coffee, cotton), but also (and in most cases with only limited success) covering grains. The grain warehouse receipt financing projects tended to cover only the part from the farmer to the warehouse, and not the subsequent sale from the warehouse (to the domestic or regional market) – except in cases where the World Food Programme was to use the warehouse as a collection point. Not linking warehouses to improved marketing opportunities, makes their use less interesting for farmers: transaction costs may exceed the benefits of being able to access loans at improved conditions. Commodity exchange initiatives in Africa, which link inventory finance to new electronic marketing opportunities, may well change the economics of farmers' grain warehouse receipt finance in the continent – this will be further discussed below.

Pre-export finance (PXF) is more risky

Moving up the value chain, banks can offer pre-export financing (PXF), which enables the farmer to purchase inputs such as fertiliser and pesticides prior to producing the crop. In this model the bank takes crop and weather risk, financing against a contract rather than a physical asset. But the conditions are stricter and the cost of financing is higher. Unlike inventory finance, the performance of the producer is paramount. International banks typically make PXF available to producers with at least three years experience producing a crop (domestic banks, which face much higher costs of capital and can moreover not insure themselves against political risks that may affect the export transaction, have difficulty competing on this market, at least for exports to the main developed economies). The bank takes a three-year average of the crop and finances up to 50% of its value, although with

new clients the bank might start as low as 10%, especially if production levels have been erratic.

In this model, the bank provides pre-finance to the producer, who uses the funds to purchase inputs, takes title over the maize once it has been deposited in the warehouse, and is repaid once the maize is sold to the trader or offtaker. For long-standing clients, PXF can take the form of a pre-payment by the bank, which is repaid by the trader at the end of the deal (along with interest from the producer). Payment risk is mitigated using various tools; Letters of Credit (LCs) are the most common in Africa, which transfer payment risk from the buyer to his bank. But given the high level of risk associated with this financing – which is disbursed before the crop has been produced – the proportion of funding available is low. Taken together, PXF, pre-payment and inventory finance are the building blocks of agricultural value chain financing, linking together the commodity and financing flows into a single chain. PXF and pre-payment models could be the solution for African farmers trying to raise financing for inputs. But they rely on the bank's willingness to take performance risk, and as a result are offered only to the most reliable clients.

Working capital and overdrafts can be a substitute for trade finance

Given the high level of constraints on securing PXF or pre-payment – which can require clients to pledge collateral (property or 100% cash) and pay high interest rates – many clients use working capital and overdraft facilities as a substitute for trade finance. Under this model, the bank extends a facility at the start of the season to a producer or processor who uses the funds to purchase inputs, pay for transport and/or finance purchases, and then repays the bank once the final goods have been sold. Such a model implies a close and trusting relationship between the supplier, trader or buyer and the bank, as well as a good track record of performance. Working capital and overdrafts are the preferred tools of many local banks to finance producers, sometimes using their house or property as collateral. On a larger scale, banks offer rolling overdraft facilities to processors to finance purchases, which are disbursed in tranches throughout the season. Trading houses can end up with multi-million dollar facilities to finance all of their activities in the season, with only minimal control from the bank.

Rolling overdraft facilities for African wheat mills

Some African wheat mills benefit from credit facilities provided by international banks (and in certain cases, trading companies), with funds provided against three components of their business cycle:

- For their import of wheat (from an international trading house that was often instrumental in putting the facility in place)
- For their inventory of both wheat and wheat flour, under a monitoring arrangement that permits the bank to see the flow of goods
- For their sale, on deferred payment terms, to buyers in their country and in other countries in the region.

Such financing schemes could be readily adapted for wheat or maize procured within Africa.

Trading houses are becoming ‘shadow banks’

Following the withdrawal of international banks from the trade finance space during the global financial crisis, trading houses have stepped into the breach, providing financial solutions to their clients. The most common is pre-payment, which involves the buyer, who has a good relationship with the trading house, prepaying for part or all of the goods, with the payment passed by the trading house to the producer. Trading houses also discount invoices to suppliers, issuing invoices (which specify deferred payment, say after 90 or 180 days) on the delivery of goods which the suppliers can cash – at a discount – at a cooperating bank. They can use repo structures, in which they take inventory off the balance sheet of a processor by buying it with a simultaneous agreement to sell it again later at an agreed price. However, the fastest growing form of finance offered by trading houses is discounting bills of exchange. Under this model, the trading house pays the supplier for the goods and takes delivery of them, later selling them to the end buyer. The trading house makes a profit by receiving a promissory note, or discounted bill of exchange, of greater value than what they paid to the supplier.

By recycling the money given to them by banks, and by using it to finance their suppliers, trading houses have become “shadow banks.” And they are developing financial services of their own, making them more like trade finance banks; for example, Cargill offers its clients a package of futures & options, price risk management and input finance. This has cemented the trading houses’ grip on the sector, and is choking off the emergence of new players.

Africa’s agricultural SMEs are struggling to raise financing

The losers in this process are Africa’s agricultural Small and Medium-Sized Enterprises (SMEs). The vast majority of Africa’s agricultural output is produced by smallholders, who typically tend farms of less than 2 ha, which puts the vast majority of agricultural businesses – including cooperatives – into the SME sector. These SMEs are the ‘missing middle’ – businesses that are too big for micro-credit but that do not have the scale to be viewed as corporate clients by banks. According to IFC estimates, sub-Saharan Africa’s SMEs have a financing gap of US\$80bn-100bn, a large proportion of which is in the agricultural sector (Figure 13). Owing to their lack of credit history, collateral or scale, SMEs struggle to raise financing for capital investment and inputs. Many also lack the basic skills of planning, management, marketing and accounting that are required to secure bank finance. Many smallholders and cooperatives can benefit from outgrower schemes, receiving inputs and training from the plantations they surround, and selling their produce to feed its processing operations. But without scale these small producers are unable to compete with the big trading houses or offtakers, who can use their scale to absorb losses or mishaps and who can turn a profit, even on the thinnest of margins. As a result, the trading houses are taking an ever larger share of the financing and, ultimately, the market.

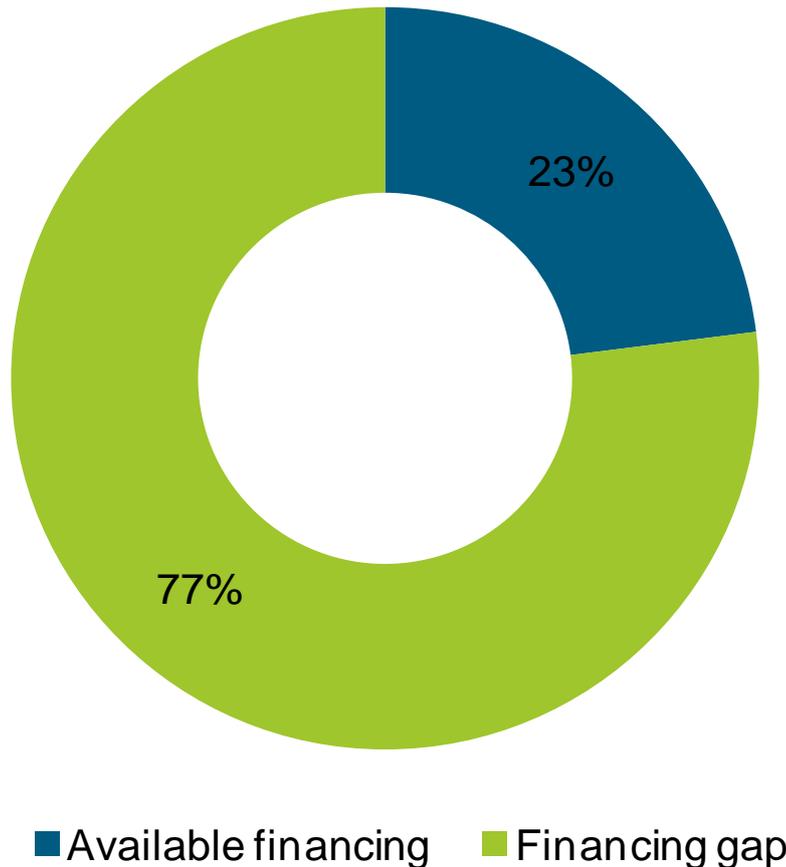


Figure 13: MSME financing requirement in Sub-Saharan Africa, 2012

Total number of MSMEs (formal and informal) in sub-Saharan Africa: 40 million, of which:

- With current account: 18 million
- With loan/overdraft facilities: 4 million
- Unserved/underserved: 22 million

Source: IFC enterprise finance gap database.

Recommendations to boost financing of Africa's food value chain

Given the surge in African food demand, rising import dependence and the constrained availability of financing for Africa's smallholder farmers, there are six key recommendations for improving intra-regional food trade in Africa: building value chain financing; facilitating mobile payments and mobile finance; promoting new trade corridors; creating trade-supporting institutions, including commodity exchanges, warehousing infrastructure and collateral management; expanding credit risk management facilities; and introducing new African government/regional organisation schemes that support financing for intra-African trade.

Building value chain financing

A key objective for all those keen on the sustainable development of Africa's agricultural sector should be value chain financing: the creation of a vertically integrated and harmonious

flow of commodities and money through the production chain, running from the inputs to farmers at the start, through the traders and processors in the middle, to the offtakers and consumers at the end (Figure 14). Value chain financing is not intended as a replacement to conventional finance – rather it can link together commodity flows that are currently financed separately and can help reduce the concentration of risk at a particular point in the chain. Knitting together this value chain is the ultimate prize for any bank, because the value chain represents more than just the commodities running through it, but also the numerous banking services branching off these flows. When all of these flows are seamlessly linked into one chain, it is much easier to identify and mitigate the risks, and banks can be more flexible with repayments (many traders slip a few days over their 90-day financing limit). Furthermore, once a proper value chain financing is in place, it can continue as a virtuous cycle season after season, as long as the commercial relationship continues to be profitable for all value chain participants.

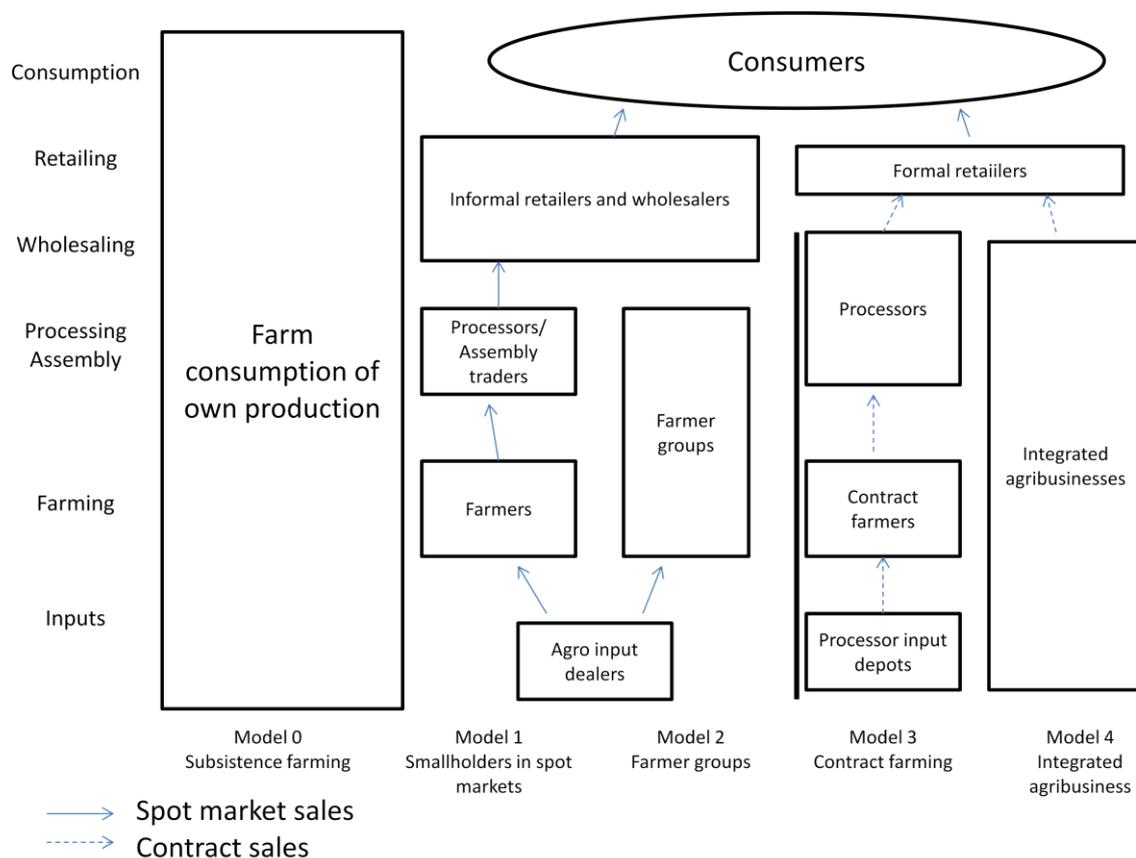


Figure 14: Business models for inclusive agricultural value chain financing

Source: KPMG, The agricultural and food value chain – entering a new era of cooperation, June 2013.

But creating such a value chain is challenging, not least because it requires extensive local knowledge of the risks, operating conditions and market players in a particular country, as well as a holistic approach. Most value chain financings that currently operate on the continent are set up for export flows towards western markets, and were developed by western banks who worked with partners on the ground to strengthen the chain – including with local agent banks, and with NGOs that work with farmers to improve their performance as suppliers. For intra-regional chains, however, Africans banks will have to play the leading role in linking this chain together, leveraging on their local knowledge and relationships with

the African players in the chain. For example, if the client of an African bank has a long-term relationship with a supplier or buyer that the bank is already financing, the bank should be able to lend to them too, in effect financing the same commodity flows. Local banks can also help link different ends of the chain together, for example helping local retailers and distributors link up with suppliers in neighbouring countries. This is clearly a job for local, African banks, rather than the multinationals, as they have a presence on the ground and a commitment to invest time and money in developing the chain.

It is worth highlighting that it is likely that a reasonably well-organised value chain which does not include an external financier will, in fact, become a chain in which the weakest (the farmers) finance the strongest (the agro-industrial buyers). In developed countries, it is very common that large offtakers such as processors and supermarkets buy on deferred payment terms (including from developing country farmers who produce fruits, vegetables and flowers for sale to such buyers). From anecdotic evidence, this practice is readily replicated in developing countries. For example, an analysis of the payables of Tanzanian agro-industry in 2012 showed that these stood at the equivalent of 175 days of supply; in other words, its suppliers had to wait on average for almost 6 months to be paid.²⁴ Inserting bank financing or factoring (so that suppliers can immediately discount their invoices) into such value chains can solve the problem.

Mobile money transfer and mobile finance

Developing mobile money payment and mobile finance could transform the marketing of Africa's agricultural crops. One of the biggest risks facing buyers in the field is the theft or embezzlement of funds; earlier this year a pisteur from one of the largest cocoa traders in Côte d'Ivoire was robbed of US\$500,000 in CFA Francs which he was carrying to distribute in the field. Not only are buyers laden with cash an obvious target for thieves, but it is asking a lot of the integrity of one man to honestly handle what could be an entire life's salary in cash. With mobile money transfer, all payments can be made between farmer and buyer by mobile phone, and the farmer can instantly use the funds to make other payments, for example school fees, utility bills or a loan from a friend or relative. In addition, the record of mobile payments can serve as a credit history for both seller and buyer, providing one of the building blocks needed for banks to finance them. Mobile money transfer can also serve as the platform for implementing projects in agriculture, health and education in agricultural communities.

²⁴ Kilimo Trust, National and Regional Agricultural Markets & Trade, instruments of wealth creation and elimination of hunger, February 2013.

“As take-up of mobile money services grows, cross-border money transfer services are emerging as the next opportunity for operators and other mobile financial players.” The needs of informal traders are one of the drivers of this growth.

By mid-2014, there were already 23 operator-led cross-border mobile money transfer initiatives in Africa, incorporating 17 countries. Telecom operators involved included Bharti Airtel, MTN, Orange, Tigo and Vodafone. They mostly partnered with financial institutions such as Western Union or Mastercard, to meet regulatory requirements. For example, users can send money through Western Union which the recipient in another country can receive in her mobile wallet. Direct mobile-to-mobile transfers are scarcer, but operate for example between Rwanda and Tanzania, and between Burkina Faso and Côte d’Ivoire.

Analysys Mason,

Cross-border mobile financial services in Africa: the next big opportunity for mobile operators, 2014

However, mobile money transfer, including for distributing loans and collecting repayments, still has a long way to go before it is fully incorporated into Africa’s agricultural sector, and there are many practical obstacles to overcome. Mobile payments are highly developed in East Africa where M-Pesa has expanded to take in the whole economy, with in 2013 around 43% of Kenya’s GDP passing through mobile phones. But this system has yet to take off in West and Central Africa, mainly owing to the less conducive regulatory structure and the poorly developed mobile telecoms infrastructure in rural areas, with a lack of a signal in many rural areas. Governments need to reform telecoms regulation to permit the expansion of mobile payments, which will enable telecoms companies to invest in new services. Afraca could lead an initiative to bring together a coalition of producers, governments, telecoms companies and development finance institutions to develop mobile payments for Africa’s food producers. In the short term, mobile payment pilots could be launched in small towns and collection centres, where there is a reliable mobile signal, and these can be expanded into the interior in tandem with the roll-out of telecoms and social services.

Developing new trade corridors

Key to boosting Africa’s intra-regional food trade will be facilitating the flow of agricultural goods from surplus to deficit regions, and the development of new trade corridors could act a major catalyst. Long-standing trade routes exist along the West African coast, notably from Dakar to Lagos, and from coastal countries to the interior, from Senegal and Côte d’Ivoire into the Sahel, from Cameroon into Central Africa, and from Kenya and Tanzania into Southern and East Africa. But there are plans to develop new trade corridors, by building on and expanding existing infrastructure (Figure 15). The most ambitious project is the Trans-African Highway network, a backbone of major highways linking together all regions of Africa. Once completed, the network will offer the intriguing possibility of driving from Cape Town to Cairo, or from Djibouti to Dakar. But there are major gaps not only in the network itself, but more importantly in how it will be financed and maintained.

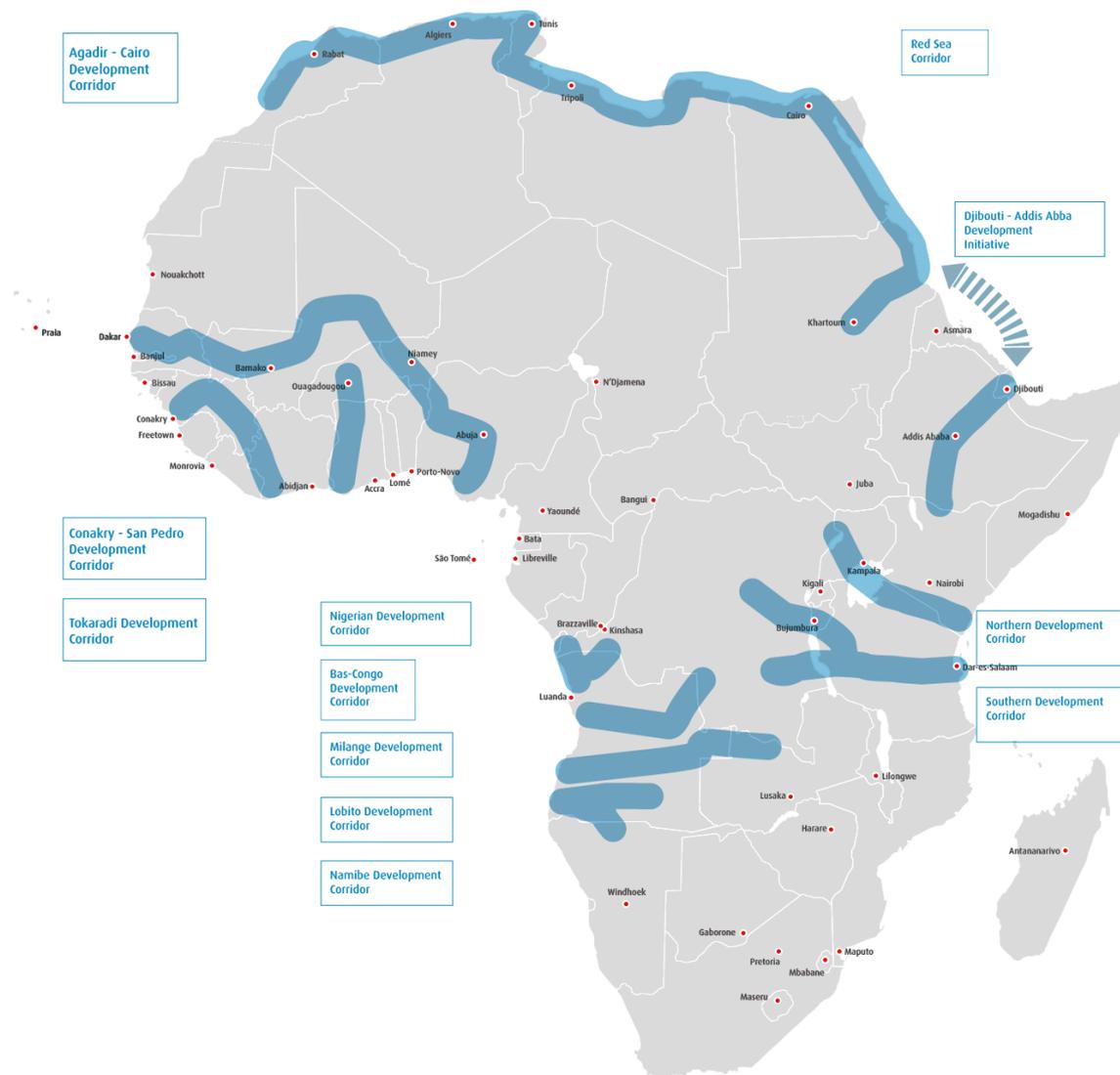


Figure 15: Proposed regional & coastal trade corridors

Source: Ecobank Research.

What is having a more immediate impact is the development of regional trade corridors. These are focused on integrating trade in a particular region, rather than serving the greater ideal of pan-Africanism. The most successful is the Maputo Development Corridor, which links South Africa’s industrial Gauteng province to the port of Maputo, and which has boosted traffic and trade between the two countries over the past decade. Another important corridor project is the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), which despite its name also includes Malawi, Zambia and the Democratic Republic of Congo – increasing regional trade in locally produced crops (often in processed form) such as wheat, sunflower, soyabeans, rice and beef is an objective of the project.²⁵

In terms of new projects, perhaps the most ambitious is the Lamu Port and South Sudan Ethiopia Transport (LAPSSET project), which aims to build a port at Lamu on the Kenyan

²⁵ Southern Agricultural Growth Corridor of Tanzania. Appendix IV: Value Chain and Market Analysis, 2011.

coast, with a road, railway and oil pipelines running to Ethiopia and South Sudan, and possibly into Central Africa and beyond.

Many other trade corridors have been proposed: from Khartoum in Sudan across the southern Mediterranean to Agadir in Morocco, and from Dakar along the Niger River to Port Harcourt in Nigeria (the Niger Development Corridor). There are also numerous corridors under development along the coasts of Southern Africa, linking landlocked countries to the sea, the largest of which is Angola's Lobito Development Corridor, which includes the newly repaired Benguela Railway. These corridors are planned to be arteries of Africa's intra-regional trade, and they could unlock the potential of intra-regional food trade, creating new routes for surpluses to transit the continent to where they are needed, and obviating the need for more expensive food imports from the international market.

Strengthening trade-support institutions

Regional food trade flows can only increase if policies are improved (permitting more trade to take place in the formal sector), and the support institutions for such trade are strengthened. This includes the institutions that strengthen contract performance (such as standard-setting bodies, and regional commodity bodies with arbitration panels that can decide on commercial conflicts, and national courts that then endorse the execution of arbitration judgements), price information systems and trade financing structures. These three can come together in a regional commodity exchange.

Regional industry bodies can improve conditions for regional trade finance

The most progress in improving standards for regional food trade has been made in Eastern Africa, in particular through the efforts of the Eastern African Grain Council (EAGC). EAGC, established in 2005, is a membership organisation of the grain value chain stakeholders in the region, including the leading farmers' organisations, processors and trader. EAGC is active in 10 countries (from Sudan to Tanzania, from Zambia to DRC), and is looking to expand its reach. It considers the promotion of regional trade as its core mandate, and in this light, has been working both within the grain industry and, through Public-Private-Partnerships, with governments, to improve the standards, practices, support structures (in particular, market information systems), regulations and policies of grain trade in the region. One of its programmes, in cooperation with CTA, has been on the development of warehouse receipt finance.

In July 2015, EAGC's took on an expanded role in promoting regional grain trade by launching its G-Soko platform. The platform will link smallholders to grain buyers across East Africa through a system that provides information on market opportunities, connects buyers and sellers and allows the tracking of goods – it covered Uganda and Kenya at its start, and Tanzania and Rwanda are expected to be added later in 2015. The system is built around certified warehouses that can ensure both the quantity and the quality of the grains that are being offered for sale. Producer aggregation centres are linked with these certified warehouses to enable smallholders to become involved. On depositing grains, owners receive electronic warehouse receipts, which (if they do not immediately sell their produce) they can use to secure inventory finance.

“The opportunity for Africa to achieve its development potential is unprecedented, and.. the international environment has changed, and continues to change, in ways that open up new possibilities, new potential and new paths to progress for our Continent. The big question ... is whether Africa is to do this as 54 separate countries or as Africa.”

Festus Mogae

Former President of Botswana
and then-Chairman of Bourse Africa

African Development Bank/Bourse Africa, Pan African Workshop for Regulators of Derivatives and Commodities Exchanges, Rapporteurs' report, Gaborone, 25-27 July 2012

In 2008, a decision was made by grain sector stakeholders in West Africa to create a West African Grains Network (WAGN), with a scope of activities similar to that of EAGC. However, the network has been slow in being activated – it may finally become operational in 2015. Meanwhile, sectoral organisations for the grain sector were created in many West African countries, which have started work on identifying the key challenges that they should address.

Industry organisations like EAGC can do much to reduce the risks that banks perceive in financing regional food trade flows. They deserve the support of governments and development partners throughout Africa, and across a broad range of agricultural commodities – regional food trade opportunities go much beyond grains.

Commodity exchanges can comprehensively link physical and financial markets

Since the Abuja Treaty of 1991, which established the African Economic Community (the predecessor of the African Union), first recognised the importance of bringing the institution of commodity exchanges to the region, there have been commodity exchange initiatives of some sort in 28 African countries. Virtually all have failed, often because of a lack of government cooperation. Most were national initiatives. More ambitious regional or even pan-African initiatives (such as Bourse Africa) started in the late 2000s, but they have been facing difficulties, including resistance by groups keen to control over their own national exchange.

In principle, the creation of commodity exchanges could bring large benefits to Africa's agricultural value chains (benefits that have been well-documented in South Africa, as well as for commodity exchange initiatives in other parts of the world).²⁶ A well-run exchange, with an extensive warehousing network in both urban and rural areas, and with efficient collateral management, can act as a catalyst for engaging smallholders and integrating them into the value chain. The price information they generate empowers small farmers. They can provide an operational backbone for strengthening economic links among African countries. They permit more cost-effective, easier and cheaper links between African farmers and the continent's fast-growing cities. They permit African entrepreneurs to capture a larger part of the upstream part of Africa's commodity production. They make it possible to de-risk investments in Africa's commodity sector – from production to processing and logistics. By

²⁶ See UNCTAD, Development Impacts of Commodity Exchanges in Emerging Markets. UNCTAD/DITC/Com/2009/9.

providing price transparency as well as an easy sales mechanism, they help make financiers (including investment funds) to become more comfortable with lending to Africa's commodity sector: as long as the exchange ensures that the warehouse receipts are issued by reliable warehouse operators, banks are happy to advance financing against them, enabling for example farmers to get paid as soon as they deposit their goods in the warehouse and freeing up financing for inputs.. And they help reduce the losses resulting from inefficient supply – typically 30-40% of Africa's agricultural crop rots before it reaches the market – by giving farmers the opportunity to store their goods in high-quality warehousing located close to their farms. However, to successfully develop an exchange that, once it has reached sufficient volume to sustain itself, can indeed provide all these benefits is difficult (but it has proven possible in other parts of the world where conditions were not necessarily much better than those in Africa's commodity sector).

One of the first commodity exchanges to be created, SAFEX (now part of the Johannesburg Stock Exchange) is still the continent's most successful. In 2012, it traded 204 million tonnes of grain and oilseed futures contracts. It has, however, remained a domestic exchange. In 2013 it had plans to list a Zambian grain futures contract, but these never materialised. Another domestic exchange is the Ethiopia Commodity Exchange (ECX), which was created in 2008 as a partnership between market players, members of the exchange and the Ethiopian government. The ECX trades spot contracts in coffee, maize, wheat, sesame and haricot beans, with 586,000 tonnes of commodities traded in the 2013-14 fiscal year; the total value traded was US\$ 1.4 billion, around half of that coffee, and most of the remainder sesame (by law, virtually all of the exports of these two commodities have to be traded through the exchange). The ECX is backed by an extensive warehousing system, upcountry and in Addis Ababa, and a warehouse receipt system (WRS) that is used for the exchange's deliveries (with plans to further develop its use for financing farmers).

There are currently two regional exchanges that are active in Africa, one with its base in Rwanda (the East African Exchange), one in Malawi (the Agricultural Commodity Exchange for Africa, ACE). The former, which started spot trading in 2014, so far has failed to gain traction. The latter, which started trading in 2006 with members from Malawi, South Africa, Zambia and Zimbabwe, has seen its trade fluctuate, partly because of its dependence on the World Food Programme as the main buyer on its platform. In the first 7 ½ months of 2015, it reached a volume of over 325,000 tonnes under warehouse receipt, and over 120,000 traded.

To succeed a commodity exchange needs to reach critical mass, which means not only trading a high volume and variety of commodities (and other assets), but also attracting traders to use the exchange as part of their trading strategy (in the process providing volume and liquidity to the exchange). The backbone of a successful commodity exchange is its warehousing system, which requires high-quality collateral management in order to ensure the quality of food flows and to secure traders' trust in the WRS and the contracts issued by the exchange. Given the strong reduction in the costs of exchange trading software (and the associated other software supports), the private sector should be able to fund the core costs of an exchange itself. However, governments should provide room for the exchange to be established (avoiding protection of special interest groups), and ensure a favourable legal and regulatory framework; while development partners may support training programmes aimed at farmers, and the development of physical infrastructure such as warehouses and weighbridges.

Box 3 illustrates how a regional commodity exchange can de-risk trade and finance across borders.

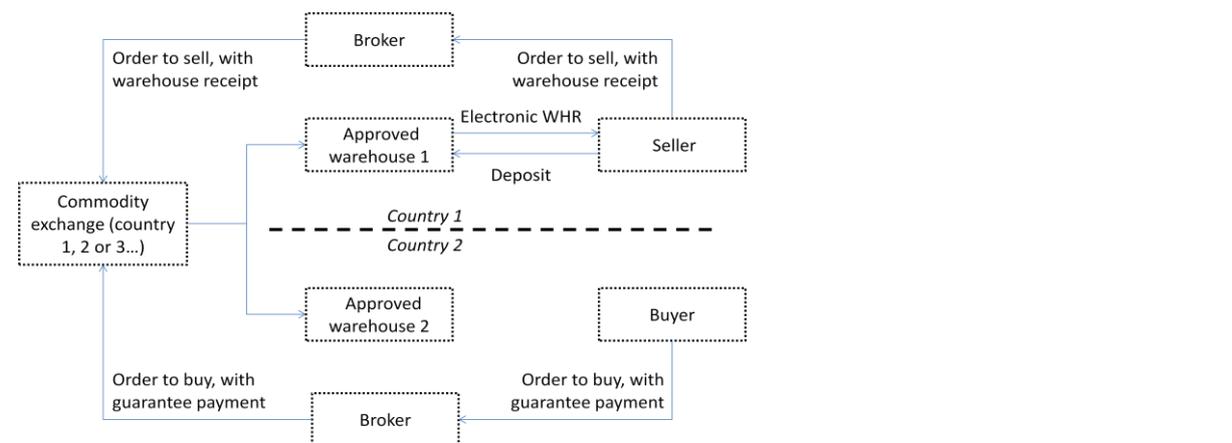
Box 3: A regional commodity exchange: a backbone for intra-African food trade and finance

Through its rules, procedures and operations a commodity exchange creates a microcosmos, an island of excellence, for those who trade on its platform. Trade is restricted to members of the exchange (when, say, a farmer wishes to trade, she has to pass through a broker who is an exchange member), and to become a members one has to agree to the conditions set by the exchange. This means that under contract law, these conditions govern the trade that takes place through the exchange platform – and contracts tend to be enforceable irrespective of a country’s legal regime.

Among other things, a commodity exchange will set quality standards – an exact set of specifications that goods need to conform to if they are to be traded under a certain name (such as “maize grade B”); rules on contract performance and penalties for non-performance; and arbitration procedures to deal rapidly and without recourse to (slow) courts with member conflicts and defaults. Exchange members generally have to guarantee their performance through fixed deposits with the exchange, as well as variable deposits (“margins”) for the transactions that they offer to undertake through the exchange. These financial aspects are handled either through the “clearing department” of the exchange, or through an independent “clearing house” which, on behalf of the exchange, manages the exchange’s credit risks, the various payments associated with trading on the exchange platform, and the delivery of goods through the exchange. To facilitate delivery, the exchange normally has “approved warehouses” – warehouse operators are scrutinised both for technical competence and for financial strength before they are approved. As a result of all these risk management practices, an exchange can guarantee all trade on its platform.

In other words, from a seller’s or buyer’s perspective, the only counterparty risk that remains is the credit risk of the exchange itself, which given the normal level of capitalisation of an exchange is minimal. If the exchange is active in more than one country, then, the counterparty risk of dealing with a buyer or seller in another country disappears. Farmers’ organisations, traders, processors and end-buyers can safely trade across borders. And similarly, banks can safely finance goods that are in an exchange-approved warehouse, even if they are in another country.

To illustrate the process, consider the flow chart below:



A seller in country 1 deposits goods in an approved warehouse in his country. The warehouse operators issues an electronic warehouse receipt in the commodity exchange's system, and an exchange-approved inspection company adds its quality certificate. The seller instructs his broker (a member of the exchange) to offer the goods represented in the warehouse receipt for sale. A buyer in country 2 sees the offer, and is interested to buy. He now has two options. One is to make an offer to buy at approved warehouse 1, at a price somewhat lower than what the seller asks (in order to guarantee his performance, he has to make a margin payment through his broker). The seller may react, and if the two agree a deal is struck, and the buyer pays the remaining value – transporting the goods to his country is now his responsibility. Option 2 is that the buyer makes an offer to buy from approved warehouse 2, in his own country. The seller may be interested in the opportunity, check the transport and related costs to move the goods from warehouse 1 to warehouse 2, and based on his findings make an offer to sell. If the two agree on a price, a deal is struck. Or alternatively, a trader may see the offer for sale in warehouse 1 and the offer to buy from warehouse 2, and see an opportunity for profit by arranging the transport from 1 to 2. In any case, the parties in a deal can buy and sell fully secure in their knowledge that the deal will progress smoothly, even if they have never dealt with the physical counterparty before.

African banks could finance more intra-regional food trade if they could outsource some of the management responsibilities

In sub-Saharan Africa, collateral management agreements (CMAs) are extensively used to facilitate the financing of imported foodstuffs and fertilisers but, with the exception of the Republic of South Africa and to some extent, Zambia, are rarely used to support the financing of nationally- or regionally-traded food commodities. Collateral management has also been used quite often in Africa to enable the financing of complex and risky export transactions towards western markets, but equivalent transactions for regional food trade appear to be missing. The contrast is particularly stark in the case of rice trade, where CMAs facilitate a large part of African's 12 million tonnes annual rice imports, at a low per tonne fee – compared to virtually none of the 12 million tonnes of rice produced in the continent that gets financed using this mechanism.

The international banks and traders who are the main users of these CMAs use collateral management agencies not only to secure the warehouses where their physical collateral is stored, but also, to provide expertise and hands-on intelligence on markets and products. The companies that they use are mostly western firms, most of which use western expatriates who oversee large local teams to manage their operations in African countries. These collateral managers tend to act on the demand of the international banks and traders that they normally work with when deciding to start operations in a country.

Although there are small national collateral managers servicing the local market (domestic banks financing domestic farmers' groups, processors and traders), there are hardly any collateral managers that are well set up to finance regional trade flows, with only one group that is active in several countries in Africa having its headquarter in the region (in South Africa).

In principle, leading African banks could take the decision to create, jointly, a collateral management company that would work as an agent for any of them in structuring commodity financings. Banks in the USA, such as Citibank and American Express Bank, have in the past set up such companies (now long since disbanded as these banks have moved to other financing modes) in the past as a way to enhance their capacity to provide SME finance or

international trade finance. Banks in other countries (especially Turkey as well as a number of Central American and Caribbean countries) now still have such collateral management subsidiaries. So the concept is not new.

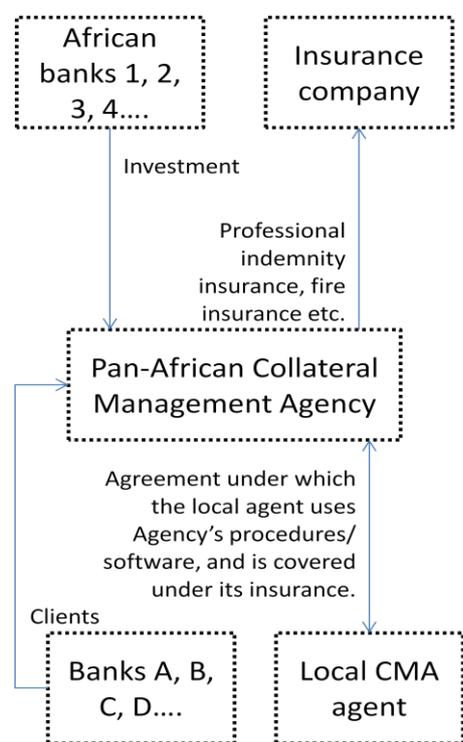


Figure 16: Possible structure of a pan-African collateral management agency.

The potential benefits of such a new collateral management company include that it would give African banks the possibility to get a presence on the ground in another country where they do not have a branch of their own; access to a level of expertise on commodities, sectors and countries (other than their own) that they would otherwise find hard to afford; intelligence on new commercial and financing opportunities in regional markets; the possibility to structure financings in a safer manner by creating additional checks and balances; and the possibility to lay off financing risks by relying on the insurance that the collateral manager will contract for its business.

However, the creation of a pan-regional collateral management company faces large challenges, all of which must be addressed if it is to reach its full potential:

- The ability to trade warehouse receipts issued by the collateral management company in different countries and regions. One of the main reasons Africa's intra-regional trade is so poorly developed (just 12% of total flows in 2012, compared with 40% for the EU and 60% for Asia) is the high number of barriers to it, including capital controls, import tariffs, quotas and bans and vested interests. This may pose regulatory and tariff barriers in the way of an East African country bank wanting to take delivery on a warehouse receipts in West Africa, for example.
- The reliability of the warehouse receipts issued by the collateral manager. If traders do not believe they can take delivery of the commodity with the quality, specifications and timing laid down in the warehouse receipt, they will not use the warehouse. The

collateral manager needs a robust system to approve and manage warehouses, backed by a strong insurance cover.

- Duplication. There are several collateral management companies operating pan-African networks, as well as numerous projects to set up national and regional commodity exchanges, which include warehousing networks. While competition in the management of warehousing is to be encouraged, there is a danger that a pan-African collateral management company could clash with existing or planned collateral management companies, potentially raising the ire of governments or regional bodies.

If a consortium of African banks decides to create a collateral management company, the following are advisable:

- Bring together a broad alliance of stakeholders, notably regional bodies (ECOWAS, COMESA and SADC), multilaterals, trading houses and agricultural producers.
- In terms of geographical reach, efforts should focus on African countries with the largest soft commodity flows, namely Nigeria, South Africa, Côte d'Ivoire, Senegal, Burkina Faso, Cameroon, Sudan, Ethiopia, Kenya, Uganda, Tanzania, Zambia and Malawi.
- The project could especially benefit regions that have high agricultural production, but also high post-harvest losses (such as Zambia's maize belt).
- Regarding the intra-regional trading of warehouse receipts, a pilot project is recommended in UEMOA or CEMAC, which have a unified monetary, legal and regulatory system. The willingness of these regions' governments to integrate economically will support the collateral management company's implementation and enable the system to be fully tested before it is rolled out to other regions. The next logical candidate is the EAC, but COMESA might prove too large (with too many conflicting national projects) to achieve consensus on pan-regional trading rules.
- In order to avoid duplication and ensure the backing of stakeholders, the collateral management company should partner with existing exchanges and other (national) collateral managers whose operations could be integrated into the pan-regional model.

Credit risk management facilities for intra-African trade

Any form of credit, even if it is as simple as the seller permitting the buyer only to pay when the goods arrive in his country, entails a credit risk. In most countries (but only a minority of African countries), governments support export credit agencies that are ready to insure exporters against the credit risks of foreign buyers. In Africa, there are not many such agencies, and those that exist tend to focus on manufactured exports to more developed markets rather than on intra-African food trade. However, there are some facilities that can be used more. Three facilities can be mentioned here.

First, the African Export-Import Bank provides a number of facilities. One set can be found under its Trade Expansion & Diversification Scheme, including a receivables purchase/discounting programme, a reimbursement guarantee facility, export credit guarantees and a facility for confirming LCs from African banks. Another set of facilities is under its Intra-African Trade Facilitation Programme, with inter alia supports to intra-African LCs, and intra-African export financing.

Second, there is African Trade Insurance Agency, a multilateral agency that provides political risk and trade credit risk insurance in 10 African countries. In the agricultural sector,

its credit risk cover has been used mostly by exporters to protect themselves against payment risks from their buyers in the Middle East and in developed countries. It can also cover credit risks of trade among its member countries.

Third, the African Development Bank and IFC operate Trade Finance Programmes, under which they can, in several ways, permit a bank from one country to obtain credit risk cover on the risks of a bank in another country. These programmes are mostly used to permit developed country banks to cover the risks of dealing with African banks, but there is nothing that stops them from being used for intra-African trade.

An alternative credit risk management system is the factoring market. In factoring, an exporter when faced with an indication of interest by an unknown/risky buyer contacts the factoring company to inquire whether it is willing to buy the eventual payment obligations of that buyer and if so, at what price. This pricing then is built into the price charged by the exporter to the buyer. On exports, the documents are sent to the factoring company which pays the exporter the agreed price, and which now takes the risk of securing payment from the buyer. Factoring is globally a significant financing instrument (in 2012, the market size was more than US\$ 2 trillion), but it is mostly absent from sub-Saharan Africa, with the exception of South Africa and (for domestic factoring mostly) Kenya. However, when value chains become organised, the scope for factoring improves (as can already be witnessed in Kenya), so the factoring market is likely to grow in importance in the years to come.

Supporting government/donor instruments

Most African banks do not lend to agriculture start-ups, and neither do micro-finance institutions. This could change if the central banks in Africa come up with innovative instrument that will facilitate banks to lend to farmers in confidence. Such measures are common in Asian and Latin American countries, and indeed, were once a mainstay of central bank policy in Europe and the USA. To avoid the problems that plagued the traditional African agricultural banks and which led in most cases to their demise, such instruments should be market-conform – supporting certain forms of finance by commercial and cooperative banks, rather than providing direct funding.

There is a start of this in Nigeria, where the central bank manages the Agricultural Credit Guarantee Scheme Fund. The fund was established to help farmers who have little or no collateral to get loans from commercial banks, by providing credit insurance for three-quarters of the loans. Another scheme of the central bank is the Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending (NIRSAL), which offers incentives and technical assistance to banks to lend to value chains (the poultry value chain has so far been the largest beneficiary).

But central banks can do much more. At a comparable level of their economic progress, developed countries relied heavily on their central banks to boost the agricultural sector's access to finance, for example with schemes to refinance warehouse receipt loans. They can now perhaps find inspiration in programmes like the DfID-sponsored Food Retail Industry Challenge Fund (FRICH), which targets improving agricultural supply chains for export to the UK by 'awarding grants to supermarkets and their suppliers, as well as to others in the food retail industry, to encourage investments at different points along their African supply chains.' Projects have covered products such as tea, coffee, cocoa,

vegetables, fruit juice, dried fruits, tilapia fish, vanilla and flowers and 11 African countries.²⁷ Why not introduce similar programmes for African value chain participants to develop intra-regional food value chains?

African central banks and regional institutions could consider setting up funding schemes to support partnerships along food product value chains so that African farmers can deliver new products in new ways to African supermarkets and food sector companies.

Conclusion

There is a lot of scope for improving intra-African food trade. African farmers have the capacity to improve their production to meet fast-growing urban demand, by improving yields and expanding acreages, By reducing the currently very high post-harvest losses, more of their produce can be delivered to consumers. It is important for governments that they are empowered to realise this capacity: only then will the trend of rising African food imports (which has the potential to cripple the continent's future growth) be reversed. For farmers to be able to supply urban consumers in their own and neighbouring countries with the quantity and quality of food that they will increasingly demand, well-organised value chains need to be created – as well organised as the current value chains from African farmers to consumers in developed countries.

Many of the elements for this are falling in place, for example the growth of supermarkets in Africa and at least vocal support of the region's governments to improve the conditions for regional trade. Regional private sector associations are creating common quality standards, common contract definitions and improved mechanisms for enforcing contract performance. Trade corridors are being developed that can act as conduits for food trade flows from surplus to deficit regions. Lack of access to finance can, however, frustrate the efforts of the private sector to build viable value chains. Currently, there is a lack of finance for intra-African trade, and action is needed by African banks to address this situation.

Given the underlying economic trends, there are in fact interesting opportunities for African banks, and these banks should realise that intra-regional trade finance can become much more important for them than the financing of the traditional cash crop exports – and contrary to the common perception among bankers that agricultural finance is risky, the strong win-win relationships in regional food value chains makes the financing of such chains relatively low-risk. There are various anchors around which banks can safely structure loans for intra-regional food trade, and they can take a pro-active role in creating and strengthening such anchors. They can bring people together across borders, by creating a pan-African collateral management company, by supporting the creation and growth of (sub-)regional commodity exchanges. Governments and regional institutions, with the support of the donor community, can do more to encourage food sector operators and African banks to develop viable value chains for intra-regional food trade and its financing, including by creating dedicated re-financing and guarantee facilities.

²⁷ <https://www.gov.uk/food-retail-industry-challenge-fund-frich>

The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food and nutritional security, increase prosperity and encourage sound natural resource management in ACP countries. It provides access to information and knowledge, facilitates policy dialogue and strengthens the capacity of agricultural and rural development institutions and communities.

CTA operates under the framework of the Cotonou Agreement and is funded by the EU.

For more information on CTA visit, www.cta.int

Contact us

CTA
PO Box 380
6700AJ Wageningen
The Netherlands

Tel: +31 317 467100

Fax: +31 317 460067

Email: cta@cta.int

 www.facebook.com/CTApage

 [@CTAflash](https://twitter.com/CTAflash)

