

Economic Empowerment of African Women through Equitable Participation in Agricultural Value Chains



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REFLECTIONS FROM THE PRESIDENT



Donald Kaberuka
*President (2005 to 2015),
African Development
Bank Group*

This has been a most exciting decade for the African continent. When I look back, it has been a privilege to lead the AfDB during such a dynamic time. For me personally, I am particularly proud of the strategic choices the Bank made to support and accelerate the new momentum.

I would like to focus today on the exciting potential for the future, embodied in this report. In implementing its Ten Year Strategy, the Bank will pay particular attention to gender, agriculture and food security to achieve the overall objectives of inclusive growth. We have made significant strides but it is time for a radical step change.

This report sets the ground to empower women to take a leading role in the business of farming and agricultural value chains regionally and globally and agro-processing through investment, business funding and providing support programs. The Bank is acutely aware that if the economic growth rate is to remain strong, sustained and inclusive, they must transform agricultural productivity, the dominant sector that mainly employs women, through technological innovation. One of the key things we must do is to ensure that African women are central to the economic growth success story. Sustained development is not possible and would be lopsided without women playing a central part.

All hands on deck will be needed. Each one of us has a responsibility to use our position to create a sense of urgency and hope, and not combat gender inequities but positively contributing to change. I am confident that together we can make a difference. I commend this report and thank the team under Geraldine Fraser-Moleketi, which has provided the needed leadership on this issue.

A handwritten signature in black ink, appearing to read 'Donald Kaberuka'. The signature is fluid and cursive, written over a light-colored background.

Dr. Donald Kaberuka

FOREWORD



Geraldine J. Fraser-Moleketi

*Special Envoy on Gender,
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One of the reasons I took up my role at the AfDB is because I wanted to drive programmes at scale to empower women on the continent. I believe that the Bank offers a unique opportunity to fund and provide support to policies and programmes that can give this continent's women the opportunities they need to realise their full economic potential, while supporting the economic upliftment of the continent as a whole.

Agriculture and agro-progressing are an ideal starting point and central to the Bank's strategy to integrate into regional and global value chains. Agriculture is a critical sector on the continent accounting for 60% of employment, and is essential for improved food security, increased household incomes and sustainable livelihoods. Agriculture also provides significant opportunities for gender mainstreaming and the empowerment of women. Women's presence in the agricultural labour force is significant at 50% and produces 80% of Africa's food, and there really is no better overlapping opportunity to support women's economic empowerment and to strengthen a critical sector on the continent. However, women's position in this sector today is precarious. They typically receive little to no remuneration because land is typically family-owned, and they have limited access to financing and quality inputs—there is little entitlement for women compared to men.

This programme could change that, through its focus on three themes: promoting agribusiness entrepreneurs along the value chain, creating products to target niche markets and expanding cooperative programmes. These themes will be targeted at four important crops: cocoa, coffee, cotton and cassava. These crops have been chosen because of their importance for food security or in being a primary generator of export revenues for African countries. Collectively, these four sub-sectors account for USD 43 billion in production value* and USD 12 billion in export value** across the focus countries.

I would like to acknowledge the Agriculture and Agroindustry Department (OSAN) for their excellent technical support in the preparation of this study. I am personally excited by the opportunities that we have identified and look forward to working with the key complexes in the Bank and AfDB's partners to make these a reality.

Finally, I would like to thank Dr Donald Kaberuka, President of the African Development Bank, for his vision and sponsorship of gender mainstreaming and this project in particular.

Geraldine J. Fraser-Moleketi

Geraldine J. Fraser-Moleketi

* As of 2012

** As of 2011

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1 CONTENTS

REFLECTIONS FROM THE PRESIDENT	i
FOREWORD	ii
ACKNOWLEDGEMENTS	iii
1 CONTENTS	iv
2 EXECUTIVE SUMMARY	1
2.1 Cocoa	2
2.2 Coffee	3
2.3 Cotton	4
2.4 Cassava	5
3 PROJECT CONTEXT AND OBJECTIVES	8
3.1 The role of agriculture in Africa	8
3.2 Taking a value chain approach	11
3.3 Objectives of the study	12
3.4 Rationale for selecting the four sub-sectors and focus countries	13
3.4.1 Cocoa	14
3.4.2 Coffee	14
3.4.4 Cassava	16
4 THE ROLE OF AFRICAN WOMEN IN AGRICULTURE	18
5 CONSTRAINTS FACED BY WOMEN IN AGRICULTURE	22
6 OPPORTUNITIES FOR WOMEN IN AGRICULTURE	28
7 COCOA	32
7.1 Executive summary	32
7.2 Global and African trends	33
7.2.1 Global demand and supply	33
7.2.2 Prices	34
7.2.3 Yields	35
7.2.4 Exports	36
7.3 Regional and global trade flows—ECOWAS and COMESA	37
7.3.1 ECOWAS regional and global trade flows	37
7.3.2 COMESA regional and global trade flows	38
7.4 Government support for the sub-sector	40
7.5 Value chain players	41
7.6.1 Cross-cutting issues	42
7.6.2 Production	43
7.6.3 Primary processing	44
7.6.4 Trade and transport	44
7.6.5 Secondary processing and sales	44

7.7	The role of women in cocoa	45
7.7.1	Production	46
7.7.3	Trade and transport	48
7.7.4	Secondary processing and sales	48
7.8	Constraints for women in cocoa	48
7.8.1	Production	48
7.8.2	Primary processing	48
7.8.3	Aggregation	48
7.8.4	Secondary processing and sales	49
7.9	Opportunities for women in cocoa	49
7.9.1	Develop and help promote women entrepreneurs in large scale agribusiness along the value chain, especially in areas where women are already involved	49
7.9.2	Help women entrepreneurs create chocolate and cocoa products branded as coming from women-led value chains to target niche markets	51
7.9.3	Expand women-inclusive cooperative programmes that increase productivity and establish women as co-owners	51
8	COFFEE	54
8.1	Executive summary	54
8.2	Global and African trends	55
8.2.1	Demand and supply	55
8.2.2	Price	57
8.2.3	Yields	58
8.2.4	Exports	59
8.3	Regional and global trade flows—ECOWAS and COMESA	60
8.3.1	ECOWAS regional and global trade flows	60
8.3.2	COMESA regional and global trade flows	61
8.4	Government support for the sub-sector	63
8.5	Value chain players	64
8.5.1	Ethiopia value chain	64
8.5.2	Uganda value chain	65
8.6	Constraints in the coffee sub-sector	65
8.6.1	Production	65
8.6.2	Primary processing	66
8.6.3	Trade and transport	66
8.6.4	Secondary processing	67
8.6.5	Sales	67
8.7	The role of women in coffee	67
8.7.1	Production	69
8.7.2	Primary processing	69
8.7.3	Trade, transport and export	70

8.7.4	Secondary processing	70
8.8	Constraints for women in coffee	71
8.8.1	Across the value chain	71
8.8.2	Production	71
8.8.3	Primary processing	71
8.8.4	Trade and transport	72
8.8.5	Secondary processing	72
8.9.1	Expand women-inclusive cooperative programmes that increase their incomes and establish women as co-owners	72
8.9.2	Create women-grown brands of specialty coffee to achieve premium prices	73
8.9.3	Create large women-owned coffee-processing businesses in high-value activities	74
9	COTTON	76
9.1	Executive summary	76
9.2	Global and African trends	77
9.2.1	Demand and supply	77
9.2.2	Prices	78
9.2.3	Yields	79
9.2.4	Exports	80
9.3	Regional and global trade flows—ECOWAS and COMESA	80
9.3.1	ECOWAS regional and global trade flows	80
9.3.2	COMESA regional and global trade flows	81
9.4	Government support for the sub-sector	83
9.5	Value chain players	83
9.6	Constraints in the cotton sub-sector	84
9.6.1	Production	84
9.6.2	Primary processing	85
9.6.3	Trade and transport	85
9.6.4	Secondary processing	85
9.7	The role of women in cotton	86
9.7.1	Production	86
9.7.2	Primary processing	87
9.7.3	Trade and transport	87
9.7.4	Secondary processing	88
9.8	Constraints for women in cotton	89
9.8.1	Production	89
9.8.2	Primary processing	90
9.8.3	Secondary processing	90
9.9	Opportunities for women in cotton	90
9.9.1	Work with cotton companies or unions to increase the number of women-only GPCs	91
9.9.2	Increase the number of women farming organic cotton	91

10	CASSAVA	94
10.1	Executive summary	94
10.2	Global and African trends	95
10.2.2	Prices	97
10.2.4	Exports	98
10.3	Regional and global trade flows—ECOWAS and COMESA	99
10.3.1	ECOWAS regional and global trade flows	99
10.3.2	COMESA regional and global trade flows	99
10.4	Government support for the sub-sector	100
10.5	Value chain players	100
10.6	Constraints in the cassava sub-sector	102
10.6.1	Production	102
10.6.2	Primary processing	103
10.6.3	Trade and transport	103
10.7	The role of women in cassava	104
10.7.1	Production	104
10.7.2	Primary processing	106
10.7.3	Trade and transport	107
10.7.4	Sales	107
10.8	Constraints for women in cassava	108
10.8.1	Production	108
10.8.2	Primary processing	109
10.8.3	Trade and transport	109
10.9	Opportunities for women in cassava	110
10.9.1	Increase the incomes of women smallholder farmers by improving their productivity and establishing links with large-scale industrial processors	110
10.9.2	Increase the incomes of women smallholder processors by providing funding and training	111
10.9.3	Develop large-scale, women-owned commercial-processing plants that will produce high value-added industrial cassava products	111
11	CONCLUSION	114
12	BIBLIOGRAPHY	116
13	EXPERTS WE INTERVIEWED	122
	Cocoa	122
	Coffee	123
	Cotton	123
	Cassava	124
14	GLOSSARY OF TERMS	126
15	FOOTNOTES	127

2 EXECUTIVE SUMMARY

Africa's increased integration into agricultural regional and global value chains is critical for its continued transformation. A central element of this transformation is the economic empowerment of women through improved productivity and increased participation in commercial and higher value-add activities in agriculture.

- Agriculture accounts for around 25 percent of the continent's GDP¹. However, productivity and yields in sub-Saharan Africa are amongst the lowest in the world².
- Women make up almost 50 percent of the agricultural labour force in sub-Saharan Africa³. These women work primarily in smallholder production; however, they receive a significantly lower share of income in comparison to men in the same sub-sector. Depending on the country, the rural wage gap between men and women in Africa is estimated to be 15–60⁴ percent. Women work largely on family-owned land, with little or no remuneration, and women's land ownership rates are also significantly lower than those of men. Even if they do own the land, they tend to have limited access to financing, quality inputs and knowledge of agricultural practices.

The overall objective of this project is to identify areas that the African Development Bank (AfDB) and its partners could target to empower women economically in agriculture. Addressing the barriers that reduce the participation of women along the agricultural value chain, from production through to processing and trade, will be pivotal in transforming their role in the sector and in empowering them economically. Furthermore, while agriculture is a crucial component of the African economy, half the workforce has limited access to the tools and support that would enable substantially increased production and output. The consequence is that, depending on the country, women produce up to 25 percent less per hectare than men. Empowering women in the continent is not only a moral imperative, it is critical for the broader economic success of the continent. Promoting the participation and productivity of women should have a direct impact on improved food security through increased productivity, improved quality of life of the rural communities supported by them through higher household incomes, and increasingly sustainable livelihoods through broader participation and access to regional and global value chains.

Four sub-sectors were selected for analysis in this study: cocoa, coffee, cotton and cassava. The first three were selected based on their economic significance for the region, due to their current export value and potential for further value add: they are largely exported from Africa unprocessed (e.g., amongst top African producers, 66–100 percent of cocoa, coffee, and cotton exports are unprocessed depending on the country), with minimal value addition to the raw product happening locally. The fourth sub-sector, cassava, was selected due to its high production value and contribution to regional food security. Cassava also presents opportunities to expand export market share by improving processing techniques and integrating production into regional and global value chains. Collectively, these four sub-sectors account for USD 43 billion in production value and USD 12 billion in export value across the focus countries.

To better understand the role of women in each sub-sector, we have focused the analysis on Africa's

largest producers. Côte d'Ivoire is the largest cocoa producer, generating one-third of the world's cocoa. Ethiopia is Africa's largest coffee producer and exported USD 771 million in coffee in 2013. Burkina Faso is Africa's largest cotton producer while Nigeria is the largest African (and global) cassava producer. For each sub-sector and focus country, we examined global competitiveness and constraints, the role of women, the constraints women face and the opportunities to increase women's income and participation.

2.1 Cocoa

USD 8 billion worth of cocoa beans was produced globally in 2012. Côte d'Ivoire, Ghana and Indonesia are the world's largest producers. Between 2003 and 2013, global cocoa production remained relatively flat, growing at 1.8 percent per year, while prices increased by 3.4 percent per year. Africa produces more than two-thirds of the world's supply and several countries have significant market share in this commodity. More than two-thirds of Africa's production is exported in an unprocessed form, offering an opportunity to increase gains through greater vertical integration of the value chain. For example, Côte d'Ivoire is the world's largest producer, but it only processed 34 percent of its production in 2013.

A significant challenge facing the long-term productivity and sustainability of the cocoa market in Africa is the reluctance of farmers to adopt new methods and varieties. Although Côte d'Ivoire has the world's second-highest yields after Mexico, these decreased by 15 percent between 2005 and 2010, mainly because aging trees were not replaced.

Cocoa supports the livelihoods of about 3.6 million people in Côte d'Ivoire and is one of the country's major foreign-currency earners. Women own 25 percent of the cocoa plantations and make up about 68 percent of the labour force. However, due to their relatively low plantation ownership rates, they have very little control over the revenues they generate and are largely unremunerated for their labour.

We identified three major constraints for women in cocoa cultivation in Côte d'Ivoire:

- The majority of women working in cocoa production do not own the plantations but instead work on family farms where they are mostly unremunerated, as cash crops such as cocoa are traditionally within the purview of their husbands;
- In primary processing and production, the majority of women are excluded from cooperatives and their associated benefits, as membership in cooperatives usually requires land ownership; and
- Lastly, the broad exclusion of women in aggregation, trade and transport activities and their under-representation as intermediaries prevents them from moving further downstream into sales.

We have identified three opportunities to increase women's incomes in Côte d'Ivoire through the cocoa value chain:

- Develop and help promote large-scale women-owned agribusiness enterprises along the value chain, especially where women are already involved but lack entrepreneurial support;
- Help women entrepreneurs create chocolate and cocoa products that can be branded as coming from women-led value chains and marketed to target niche markets, and build on current artisanal chocolate production in Côte d'Ivoire; and
- Expand women-inclusive cooperative programmes that can help women increase their productivity and establish women as co-owners.

Potential partners to help develop these opportunities include the Conseil du Café-Cacao, Mars and TechnoServe.

2.2 Coffee

The global market for coffee exports is worth USD 20 billion and grew at 1 percent per year between 2004 and 2013, largely due to an increased demand from emerging markets. Brazil, Vietnam and Indonesia supply two-thirds of the world's coffee, while Africa produces less than a tenth. Despite the small global market share, coffee is an important export crop for Africa, ranking as the continent's second largest agricultural export commodity, at just under USD 2 billion in 2011. Opportunity remains for greater gains from coffee exports through activities that add more value to the product. Most African coffee is exported unprocessed; of Africa's top three producers, Côte d'Ivoire is the only African country that exports more than 1 percent of its coffee processed. There are also opportunities to greatly increase crop yields, which on the continent can be just 20 percent of those of Vietnam, the highest yielding country.

Ethiopia is Africa's largest producer: coffee provides livelihoods for 4.5–5.0 million people. Women make up 75 percent of the coffee-industry workforce, but only control 43 percent of the revenue. This is because they receive only about 20 percent of the revenue from smallholder plots that they do not own, and usually occupy lower-paid positions that are further down on the value chain.

Women working in coffee in Ethiopia face three major constraints that reduce their income:

- Much of the wet-milling (which fetches a 25 percent higher price than dried coffee) is done through cooperatives. Because relatively few women coffee farmers are members of cooperatives, they miss out on opportunities to boost the value of their production;
- The Ethiopia Commodity Exchange (ECX) does not allow for traceability to original producers, so coffee grown by women cannot achieve the higher price that specialty markets are willing

to pay unless it is marketed as such through a cooperative union and sold directly to an international buyer; and

- Women lack business training, links to other value chain players and financing to start businesses because they do not own land.

We have identified three opportunities for women working in coffee production in Ethiopia:

- Expand women-inclusive cooperative programmes that can help women increase their incomes and productivity and establish them as co-owners;
- Create women-grown brands of speciality coffee to achieve premium prices; and
- Create large, women-owned coffee processing businesses in high-value-capture activities.

TechnoServe, the Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance organisation (ACDI/VOCA) and the Hans R. Neumann Foundation would be potential partners in coffee in Ethiopia.

2.3 Cotton

In 2013, the global market for cotton was worth USD 39 billion in production value and USD 65 billion in export value. Between 2003 and 2013, global cotton production fluctuated between 22 and 28 million tonnes. Prices started to increase in 2009 when production began to drop, and flattened out in 2011 due to increased production and synthetic fibre substitution. China, India and the US are the top global producers. In 2013, Africa contributed only about 6 percent of the global cotton production, and the yields of the top African producers are three to four times lower than those of China. Despite the lack of significant global market share, cotton is Africa's third-largest export agricultural commodity and represents an important source of foreign exchange revenue for several countries. More than 90 percent of cotton is exported in an unprocessed state, suggesting that there may be an opportunity to improve value capture through a more integrated value chain.

In Burkina Faso, Africa's largest producer, 4 million people depend on cotton revenues. Women make up approximately 50 percent of production labour, but receive less than 2 percent of the income, as they are usually not remunerated and do not control crop revenues unless they are allocated a piece of land, usually by the male head of household. Land tenure practices therefore limit the involvement of women in agriculture. Of the 9,000 GPCs (*Groupement de Producteurs de Coton*—cotton producer groups), only 43 (less than 0.5 percent) are run by women and only 2 percent of members are women. Women who are members of mixed GPCs are often prevented from participating in GPC decision-making or negotiations.

In Burkina Faso, women face a number of constraints in cotton production, including:

- Limited land ownership limits women's access to financing;
- The lack of representation in cotton producer groups and the lack of access to extension services result in lower yields for women; and
- Women have limited access to production inputs.

We have identified two opportunities for women working in the cotton sector; while these opportunities do not directly address the complex issue of land tenure, they offer work-arounds to better empower Burkinabé women:

- Work with cotton companies or unions to increase the number of women-only GPCs; and
- Increase the number of women farming organic cotton by linking them to international buyers, training them in organic farming practices, and providing access to inputs.

Potential partners include the production union and the three cotton companies.

2.4 Cassava

Africa produced USD 51 billion worth of cassava in 2013. Global demand for cassava has been growing, as it is an attractive food security crop for growing populations in emerging markets, and there is increased demand for industrially processed cassava products. Between 2003 and 2013, African production grew 3 percent per year while prices increased 5 percent per year. African producers accounted for more than 50 percent of global cassava production but less than 1 percent of world exports. The crop forms an important base for food security in the region. Nigeria is the world's largest producer: in 2013 it produced approximately 20 percent of global cassava but less than 1 percent of exports.

African production depends primarily on small-scale farmers. Processing is also largely done through small-scale processors. Significant opportunities exist to increase profitability through improved processing and management of the supply chain, and through expanded exports.

There are 6 million smallholder cassava farmers in Nigeria. Women account for 25 percent of these but earn just 17 percent of the income, mainly because of their lower productivity. Most commercial production and processing are owned by men, while women are predominant in smallholder processing.

Women cassava producers and processors face a number of constraints:

- Women smallholders tend to be 25–30 percent less productive than men. They apply less fertiliser per hectare than men, they have less training in agronomic practices and they are responsible for household chores, which reduces the time available to farm;
- Women, 90 percent of whom are small-scale processors, lack access to reliable sources of electricity as well as the capital to buy efficient, modern processing equipment; and
- Women commercial processors may produce less due to limited working capital to run their operations.

There are three main opportunities for women in Nigeria's cassava value chain:

- Increase women smallholder incomes by improving productivity and establishing links with large-scale industrial processors;
- Increase the incomes of women processors by providing funding and training; and
- Develop large-scale, women-owned commercial processing plants that will produce high-value-added industrial cassava products.

Potential partners include the International Institute of Tropical Agriculture (IITA) and Nigeria's Federal Ministry of Agriculture and Rural Development.



Across the four sub-sectors, three cross-cutting themes emerge:

- Increase the number of women entrepreneurs in large-scale agribusiness through training, providing access to financing and improving market links;
- Increase incomes by improving productivity and training women in core business skills, and ensure that women get a bigger share of the income generated as a result of their work; and
- Increase access to niche markets by producing and marketing products as coming from women-led value chains.

To develop these themes into projects, AfDB could leverage its Technical Assistance Trust Fund for smallholders and processors, provide long-term financing for women agribusiness entrepreneurs, create regional and global market links and facilitate stakeholder discussions on policy issues.

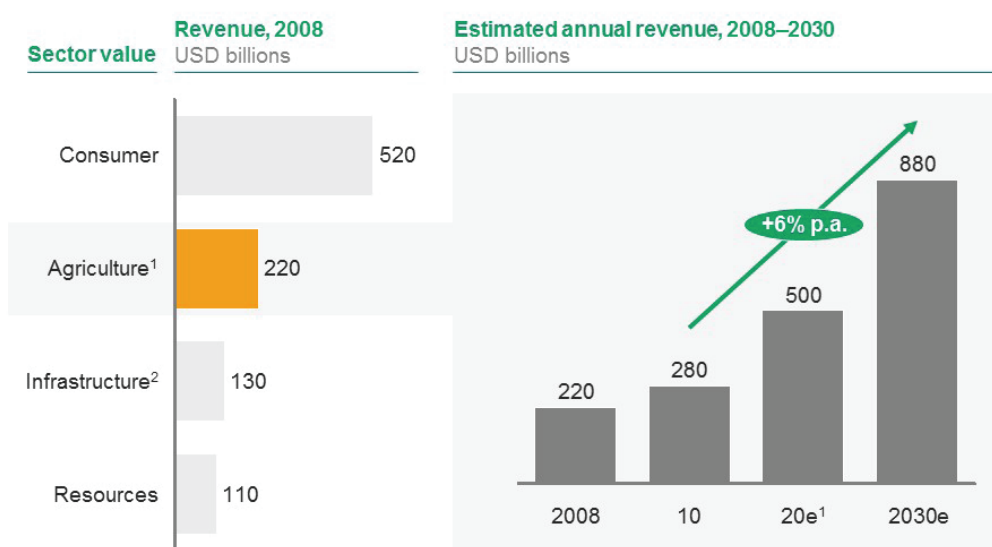
3 PROJECT CONTEXT AND OBJECTIVES

3.1 The role of agriculture in Africa

Agriculture in Africa is, and will continue to be, one of the most important economic sectors. Agriculture accounts for around 25 percent of the continent’s GDP⁵. It is the second-largest industrial sector by value after consumer goods, and the McKinsey Global Institute estimates that it will grow by 6 percent per year until 2030 (Exhibit 1).

EXHIBIT 1

Agriculture is the second-largest industrial sector in Africa and is projected to grow by 6% p.a. until 2030



¹ 2030 value of USD 880 billion, calculated straight-line equivalent for 2020

² Represents investment; assumes need remains as same share of GDP through 2020

SOURCE: International Monetary Fund; World Bank World Development Indicators; McKinsey Global Institute

However, productivity and yields in sub-Saharan Africa are amongst the lowest in the world. Over the past 30 years, Africa has almost doubled its production volumes, largely as a result of an increase in total land cultivated—not as a result of increased productivity of resources⁶. On average, Africa’s yields are less than half of those achieved in Asia. Furthermore, despite the increase in overall production volumes, Africa’s food production has not been able to keep abreast of population growth, and the continent has become a large net importer of food; agricultural imports are 1.7 times the value of exports⁷.

Research has shown that every dollar of growth generated from the agricultural sector in Africa generates an additional dollar of growth in another sector of the rural economy⁸. In addition, GDP growth in agriculture is twice as effective in reducing poverty as growth from any other sector⁹.

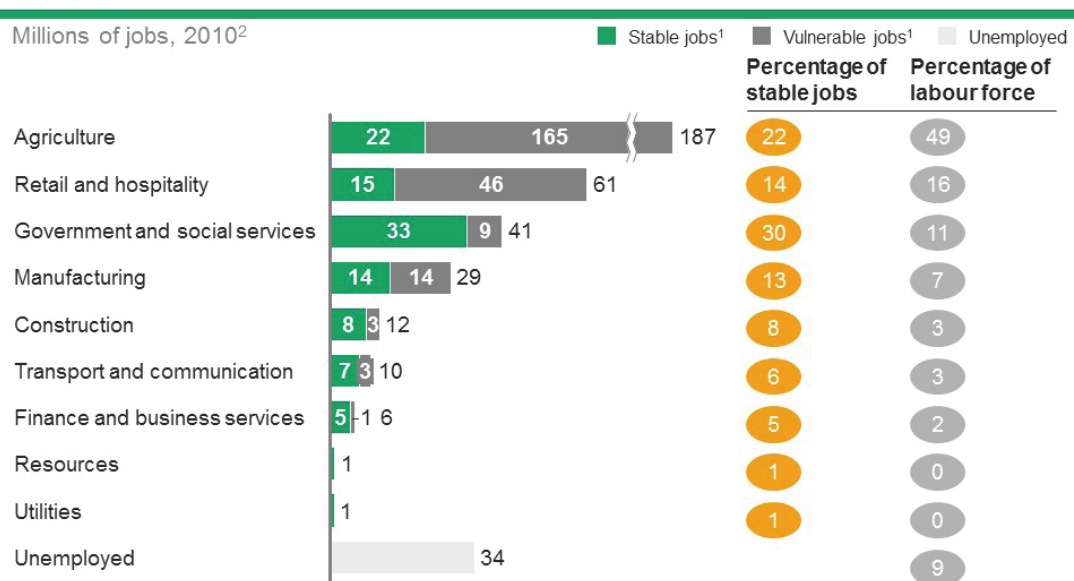
Agricultural growth reduces poverty directly by raising on-farm incomes and indirectly by maintaining low food prices and creating jobs. African agriculture is dominated by smallholder family farms which rely almost exclusively on family labour: more than 33 million, or 80 percent of all farms on the continent, are smaller than two hectares¹⁰. Women make up almost 50 percent of the agricultural labour force in sub-Saharan Africa, working mainly in smallholder production. Although they comprise nearly half of the workforce, women are often not remunerated for their labour and do not have control over the income generated on land that they do not own. They have limited access to financing and quality inputs and limited knowledge of modern agricultural practices.

Addressing the barriers that restrict women's participation in production, processing and trade could help to empower women economically, increase food security, improve incomes and livelihoods, and contribute to Africa's broader economic growth. Two key drivers of economic growth are increased productivity and greater participation in regional and global value chains.

A McKinsey Global Institute study shows that agriculture provides 22 million stable jobs, the second-largest number of stable jobs on the continent after government (Exhibit 2)¹¹.

EXHIBIT 2

After government, agriculture provides the largest number of stable jobs in Africa



¹ Stable employment includes wage and salary employees and business owners; vulnerable employment includes subsistence farming, informal self-employment and work for a family member

² Estimated using data for Algeria, Angola, Egypt, Ethiopia, Kenya, Morocco, Mali, Nigeria, Senegal, South Africa and Uganda

NOTE: Numbers may not sum due to rounding

SOURCE: ILO; McKinsey Global Institute

The McKinsey Global Institute analysis suggests that agriculture could create an additional 8 million stable jobs in Africa by 2020—and potentially up to 14 million jobs if its development accelerates. This increase would come from two sources: expanding large-scale commercial farming on uncultivated land, and shifting from low-value grain production to more labour-intensive and value-added horticultural and biofuel crops.

Agriculture’s capacity to provide jobs will be of critical importance as the continent’s population continues to expand. According to UNICEF, Africa’s population of 1.2 billion is expected to double to more than 2.4 billion by 2050¹².

Agricultural growth differs by region (Exhibit 3). The Economic Community of West African States (ECOWAS) produced USD 104 billion worth of agricultural products in 2012, the highest in Africa. This represented a modest growth rate of 1 percent per year from 2008 to 2012. By comparison, agricultural production in the Common Market for East and Southern Africa (COMESA), which sits at USD 62 billion, shrank 3 percent per year over the same period. The potential for growth in each regional economic community (and each individual country) is dependent on the availability of good-quality farm land, the ability to improve the productivity of the land farmed, access to the right inputs, livestock yields, and government and institutional support.

EXHIBIT 3

Agriculture growth differs by region



SOURCE: FAOSTAT

Crop production in ECOWAS is dominated by staple crops (USD 60 billion) followed by high-value or cash crops (USD 25 billion); livestock sales account for only USD 8 billion. COMESA's agricultural production is spread more evenly across staple crops (USD 18 billion), high-value crops (USD 14 billion) and livestock (USD 15 billion). As the incomes of Africans change and more middle-class consumers emerge, the patterns of demand will also change. The demand for meat is already outstripping supply, and over time this will shift production.

Improving productivity is critical for Africa, where yields are amongst the lowest in the world. Overall production has increased, but this is almost exclusively due to the increase in land under cultivation. By contrast, productivity has increased in both South America and Asia. In South America, increases are largely the result of labour productivity gains, while in Asia the increases have been driven by more intensive input use (e.g., fertilisers and improved varieties). Cassava is a good example of the difference in land productivity yields. Nigeria, the world's largest producer, has yields of 14.1 tonnes per hectare, 37 percent lower than in Indonesia, which has yields of 22.5 tonnes per hectare. Similarly, Ethiopia's coffee yields (0.5 tonnes per hectare) are 80 percent lower than yields in Vietnam (2.5 tonnes per hectare).

3.2 Taking a value chain approach

The agricultural value chain offers an important lens for framing the interactions of the various players and sectors that intersect with agriculture. These players include the producers, processors, traders and consumers. The benefit of the value chain approach is that it helps institutions drive integration between the different sectoral players mentioned. In an increasingly competitive market, small farmers and upstream enterprises become codependent and success depends on better linkages between these operators in the value chain of each crop type. Improvements to production yield and processing, as well as increasing the value of products, will require improved coherency and flows (of produce, services and information) within these value chains. The outcome will be better environments for farmers and small enterprises within which to operate their businesses.

The African Economic Outlook conducted an analysis of global value chains and found that, of those in Africa, manufacturing, services and particularly agriculture are the least integrated globally^{***}. This offers enormous potential for improvement and impact among the many small-scale farmers, processors and upstream enterprises.

African countries are major producers of a number of commodities but are rarely involved in the higher value-add downstream activities, reducing the income earned as well as the range of opportunities for export. For example, although Nigeria is the world's largest producer of cassava, it contributes less than 1 percent to exports globally. By contrast, Thailand produces 11 percent of

^{***} The African Economic Outlook (AEO) is a collaborative effort between three partners: the African Development Bank, the OECD Development Centre, and the United Nations Development Programme. It offers comprehensive data and analysis of the economic and social development status of 54 economies in Africa at present, with a two-year projection of its outlook for the region.

global production but accounts for 65 percent of cassava exports globally.

Where Africa is integrated into global value chains, it often does not capture the full value potential. For example, Côte d'Ivoire produces one-third of the world's cocoa, but 70 percent of its exports are unprocessed, leaving value-add activities to other countries. Similarly, Africa produces 6 percent of the world's cotton but captures only 1 percent of export value due to the high proportion of unprocessed exports.

Value addition remains one of the largest opportunities for Africa's agricultural sector. In addition to the increased revenue that could be earned by countries, local value addition will allow for local facilities to be improved which will prevent produce losses. Approximately 30–40 percent of agricultural produce is lost as a result of inefficient post-harvest storage facilities and processing methods. Agricultural value addition as a percentage of GDP in sub-Saharan Africa was 11.2 percent in 2010¹³. Taking a systematic approach to developing agricultural value chains provides an opportunity to reduce agribusiness costs while generating employment in the wider economy.

To increase integration into global value chains and improve the export imbalance, African countries need to increase their yields, build world-class industrial processing facilities and improve their links to global markets for processed products. To increase yields, the crop yields will need to increase through the expansion of relevant technologies (e.g., machinery) and access to inputs (e.g., fertiliser, pesticides and technical know-how).

Building world-class processing facilities will require significant investment in basic operating inputs such as capital, electricity and water, as well as a supply chain of raw materials and operational inputs (e.g., spare parts) to maintain and sustain processing facilities. Expanding links to global markets will require high-quality produce, good government institutions and favourable regulatory frameworks to ensure timely distribution.

In assessing the opportunities to empower women economically, this study, therefore, took a value chain approach, considering the integration into regional and global value chains as well as opportunities for higher value capture.

3.3 Objectives of the study

Although women account for nearly half the agricultural labourers in Africa, they are disproportionately vulnerable due to weak land rights and lack of remuneration, particularly when working on family farms. An increase in women's share of income has a positive effect on the way household budgets are allocated, especially for improving the welfare of children¹⁴. Therefore, the objective of this study is to identify areas that AfDB and its partners could target to empower women economically in agriculture.

The expected outcomes of the study are to:

- Identify potential interventions that will give Africa a bigger share of global value chains;
- Increase the income and economic empowerment of women smallholders by addressing gender constraints, e.g., access to land, finance and extension services; and
- Increase the opportunities for women agribusiness entrepreneurs to participate in global value chains.

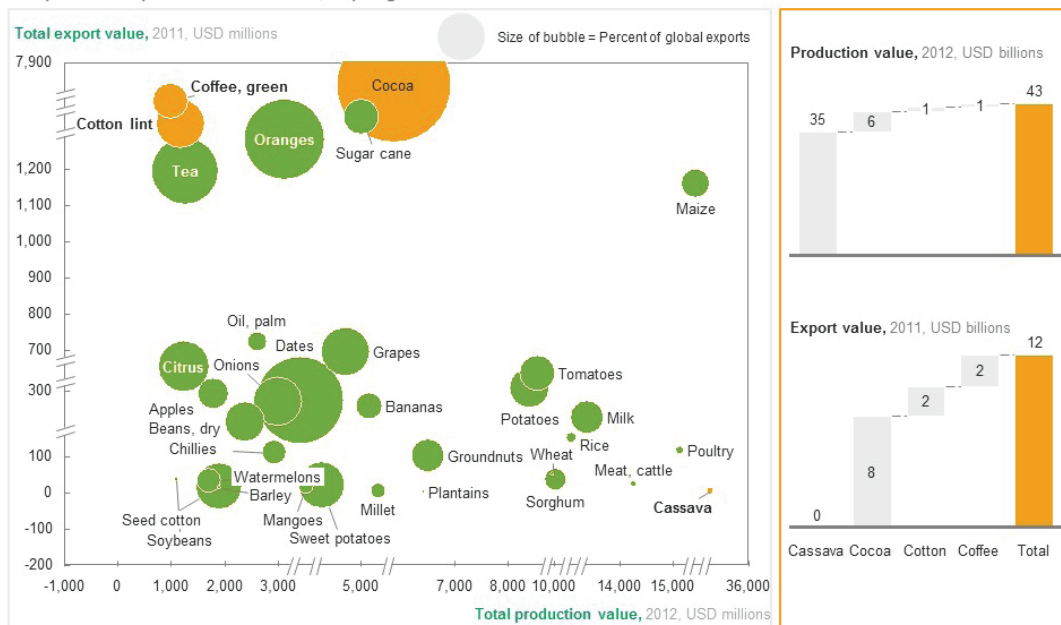
3.4 Rationale for selecting the four sub-sectors and focus countries

The four sub-sectors for this study were chosen based on their significance in terms of production and export value across Africa, and the AfDB's Agriculture and Agroindustry Department's (OSAN) Agriculture Sector Strategy 2010–2014. Cocoa, coffee and cotton are three of the most important export crops and earn much-needed foreign currency; cassava is one of the most important staple food crops and has one of the largest production values despite its relatively low export volumes. Collectively, these sub-sectors account for USD 43 billion in production value and USD 12 billion in export value for Africa (Exhibit 4).

EXHIBIT 4

The 4 sub-sectors account for USD 43 billion in production value and USD 12 billion in export value

Export and production value, top agricultural sub-sectors in Africa



SOURCE: FAOSTAT

3.4.1 Cocoa

Cocoa is the largest export crop by value in Africa and an important earner of foreign exchange. USD 8 billion worth of cocoa beans was produced globally in 2012; Côte d'Ivoire, Ghana and Indonesia are the world's largest producers. In 2012, 75 percent (USD 6 billion) of global production came from Africa. Between 2003 and 2013, cocoa production remained relatively flat, growing at 1.8 percent per year, while prices increased 3.4 percent per year. Côte d'Ivoire, the world's largest producer, produced 32 percent of the world's beans, but exported only 3 percent of the world's processed exports¹⁵.

Africa's top three cocoa producers—Côte d'Ivoire, Ghana and Nigeria—have consistently supplied around two-thirds of the world's cocoa for the last 10 years¹⁶. In 2013, they accounted for 34 percent, 18 percent and 8 percent of the global production volume and produced 1.449 million, 835,000 and 367,000 tonnes, respectively¹⁷.

Africa produces more than two-thirds of the world's supply, and several African countries have significant market share. However, the vast majority is exported in an unprocessed form, offering a potential opportunity to increase gains through greater vertical integration of the value chain. Africa sells most of its cocoa to Europe and Asia, where secondary processing occurs. Côte d'Ivoire's primary trading partners are the US (21 percent), the Netherlands (19 percent) and Germany (14 percent)¹⁸. Ghana's top three export destinations are the Netherlands (17 percent), Malaysia (11 percent) and France (9 percent). Barbados (66 percent) and the Netherlands (14 percent) are Nigeria's top export destinations.

Less than 2 percent of cocoa from Côte d'Ivoire, Ghana and Nigeria is exported to other African countries. Tunisia, Algeria and South Africa are the top African importers of cocoa.

Although women own one quarter of the cocoa plantations and represent about 68 percent of the labour force, they have very little control over the revenues generated and are largely unremunerated for their labour.

3.4.2 Coffee

The global market for coffee is worth USD 20 billion and grew at 1 percent per year between 2004 and 2013, largely due to increased demand from emerging markets. Brazil, Vietnam and Indonesia supply two-thirds of the world's coffee, while Africa produces less than a tenth.

Ethiopia, Uganda and Côte d'Ivoire are the continent's largest coffee producers and account for 55 percent of production. While the relative volume of coffee grown in Africa has been declining since 1980, Ethiopia, the largest producer, has maintained its share of global production at 2–4 percent. In fact, Ethiopia increased production by more than 6 percent per year between 2004 and 2013 thanks to a supportive regulatory structure that includes the ECX. Uganda, the

second-largest producer, has only seen about 1 percent growth per year over this time¹⁹. In Côte d'Ivoire, the third-largest producer, production has fallen by more than 4 percent per year over the same period.

Africa's coffee market is well integrated into regional and global value chains. Europe, the US, Saudi Arabia and a few African countries are the main export destinations for Africa's top three producers. Germany (25 percent), Saudi Arabia (15 percent) and the US (8 percent) were Ethiopia's largest export partners in 2012²⁰. Uganda exports most of its coffee to Germany (20 percent), Sudan (15 percent) and Italy (14 percent), while Côte d'Ivoire exports most of its coffee to Algeria (66 percent), Spain (10 percent) and France (6 percent). Despite the small overall market share, coffee is the second-highest value agricultural export commodity in Africa. Opportunity remains for greater gains from coffee exports through increased productivity and more value addition. Most African coffee is exported unprocessed; of Africa's top three producers, Côte d'Ivoire is the only country that exports processed coffee.

In Ethiopia, coffee provides livelihoods for 4.5–5.0 million people. Women make up roughly 75 percent of the workforce but control only about 43 percent of the revenue because they occupy positions lower down the value chain and are often unremunerated for their labour on family farms.

3.4.3 Cotton

In 2013, the global cotton market was worth USD 39 billion in production value and USD 65 billion in export value. China, India and the US are the top global producers. Between 2003 and 2013, global cotton production fluctuated between 22 and 28 million tonnes due to increasing pressure from substitute products. Prices started to increase in 2009 when production began to drop, and flattened out in 2011 due to increased production and competition from synthetic fibres.

In 2013, African countries accounted for 6 percent of the global cotton production, slightly less than in 2004. Burkina Faso, with a production of 274,000 tonnes (19 percent of Africa's total) in 2013, is the top African producer of cotton. Mali and Côte d'Ivoire are the next biggest producers with volumes of 184,000 and 173,000 tonnes, respectively^{21, 22}. Despite the lack of significant global market share, cotton is the third-largest agricultural export commodity and forms an important source of foreign exchange revenue for several countries. Over 90 percent of cotton is exported unprocessed, offering opportunity to improve revenue generation through a more integrated domestic value chain that includes local beneficiation.

The top African producers contribute less than 1 percent (USD 754 million) of global cotton export value²³. China and Malaysia are Africa's largest trading partners. In 2012, Burkina Faso exported its cotton mainly to China (66 percent), Indonesia (9 percent) and Malaysia (7 percent). China (60 percent) and Malaysia (16 percent) were Mali's largest export destinations, while China (30 percent), Malaysia (21 percent) and Vietnam (13 percent) were Côte d'Ivoire's largest trading partners.

In Burkina Faso, 4 million people depend on cotton revenues. Women make up approximately half the production workforce but receive less than 2 percent of the income, as they usually work on family farms and are not remunerated. They also do not control crop revenues unless they are allocated a piece of land. Of the 9,000 GPCs, only 43 (less than 0.5 percent) are run by women, and only 2 percent of all GPC members are women. Women who are members of mixed GPCs do not have the same access to training as men, and they are often prevented from participating in decision-making and negotiations.

3.4.4 Cassava

Global production of cassava was worth USD 51 billion in 2013. Global demand for the commodity has been growing, as it is an attractive food security crop for growing populations in emerging markets, and there is growing demand for industrially processed cassava products. Between 2003 and 2013, production volume grew at 3 percent per year while prices increased by 5 percent per year. African producers accounted for more than half of the global cassava production but less than 1 percent of total exports.

Of the four sub-sectors selected, cassava is the only staple food crop; it is the world's third-most important source of dietary energy after maize and rice²⁴ and one of the most important food security crops in Africa. Cassava has the potential to move beyond a food security crop to become a commercial cash crop. It has the highest production value (USD 35 billion) of the four sub-sectors but the lowest export value (approximately USD 1–2 million). African cassava is produced primarily by small-scale farmers, and processing is largely done through small-scale processors. Significant opportunities exist to reduce losses, improve processing efficiency, improve overall supply chain management and expand exports.

Nigeria (53 million tonnes), the Democratic Republic of the Congo (DRC) (16.5 million tonnes) and Angola (16.4 million tonnes) were Africa's largest cassava producers in 2013. In 2013, Nigeria produced about 20 percent of global cassava (approximately USD 16 billion in value) but only exported USD 1 million worth of cassava. Of the total exported, 61 percent went to Niger and Togo and the rest to the US (24 percent) and China (7 percent).

There are 6 million smallhold cassava farmers in Nigeria alone. Women account for a quarter of these smallholders but earn only 17 percent of the income because their productivity is lower than that of men. Most commercial production and processing plants are owned by men, while women are predominant in smallholder processing.

Collectively, the four sub-sectors meet the outlined project objectives:

- Cocoa, coffee and cotton are part of global value chains, and with the improvements discussed, can increase Africa's competitiveness and participation in global markets;
- All four sub-sectors present opportunities to improve the integration of women into domestic, regional and global value chains; and
- Cassava improves food security, which helps reduce poverty and provides opportunities for Africa's integration into global value chains.

To better understand the role of women in the four sub-sectors, we examined Africa's largest producers in detail: Côte d'Ivoire for cocoa, Ethiopia for coffee, Burkina Faso for cotton and Nigeria for cassava.

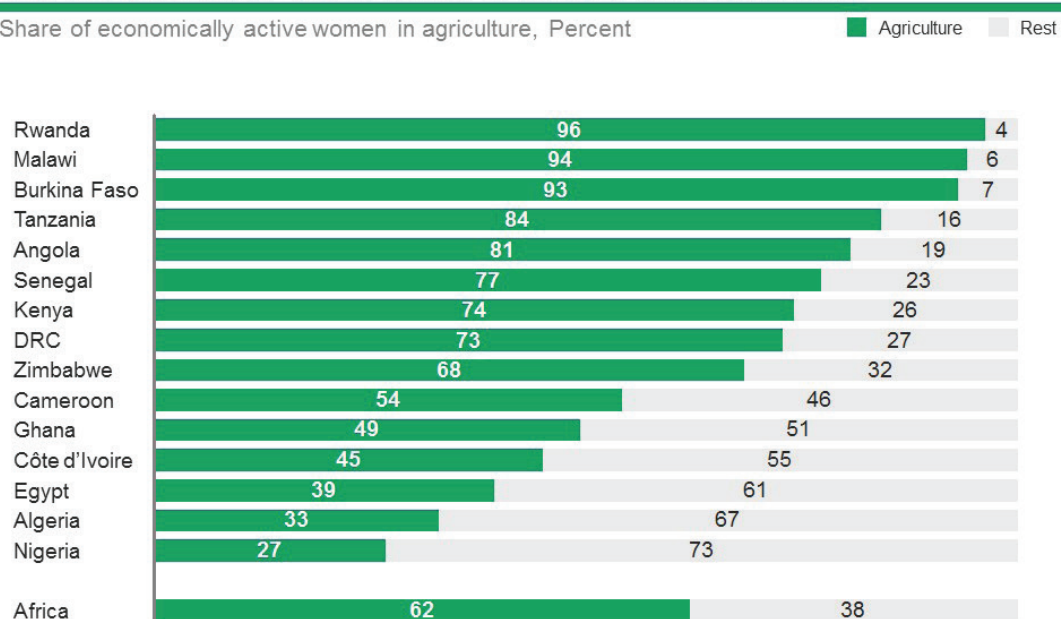
4 THE ROLE OF AFRICAN WOMEN IN AGRICULTURE

Women make up at least half of the agricultural labour force in sub-Saharan Africa²⁵. Furthermore, 62 percent of economically active women in Africa work in agriculture²⁶, making it the largest employer of women (Exhibit 5). In some countries, e.g., Rwanda, Malawi and Burkina Faso, more than 90 percent of economically active women are involved in agriculture. Despite their high level of involvement, women are largely limited to unskilled production jobs. Since few own the land on which they work, they are seldom remunerated for their labour and often do not control the income generated from the sale of agricultural produce.

EXHIBIT 5

62% of economically active women in Africa work in agriculture

Share of economically active women in agriculture, Percent

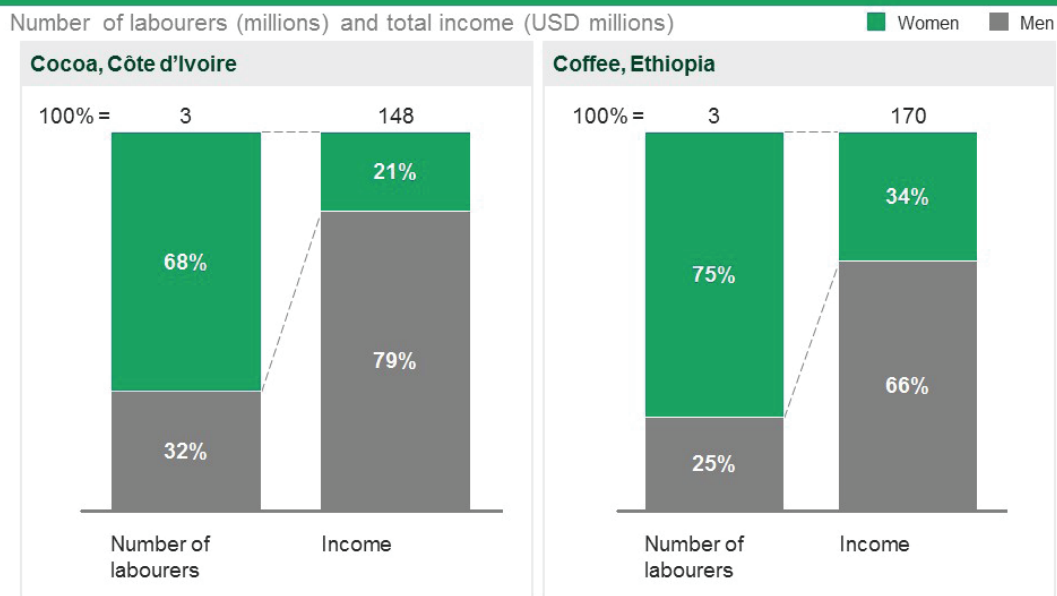


SOURCE: ILO

The potential of African agriculture remains largely untapped as rural women involved in smallholder food production are often unrecognised and unsupported. Women labourers receive a disproportionately low share of income. Depending on the country, the rural wage gap between men and women in Africa is estimated to be 15–60 percent, indicating that women are more likely to be in lower-paying or temporary agriculture jobs or are unremunerated for the labour they provide on family farms²⁷. In the case of Ivorian cocoa and Ethiopian coffee, for example, women provide 68 percent and 75 percent of the labour respectively, but earn only 21 percent and 34 percent of the income generated (Exhibit 6).

EXHIBIT 6

Women constitute more than 60% of the labour force in cocoa and coffee, but on average earn less than one-third of the income at stake



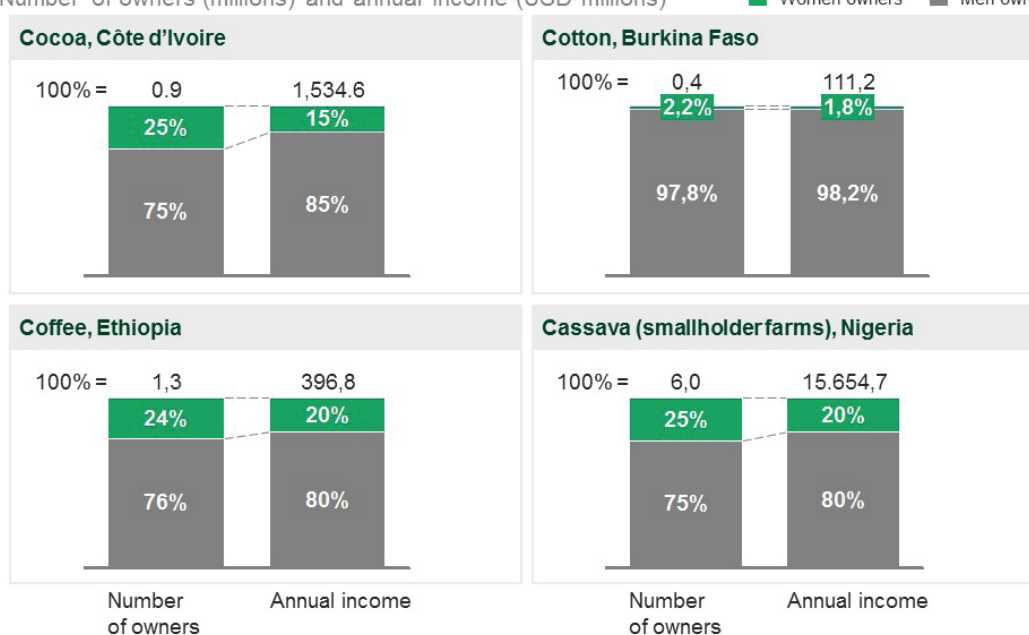
SOURCE: Mars; TechnoServe; expert interviews

Land ownership rates are lower among women than men. Across three of the four sub-sectors (cocoa in Côte d'Ivoire, coffee in Ethiopia and cassava in Nigeria) women own around a quarter of the farms. The percentage of women cotton farm owners is much lower in Burkina Faso, where only 2 percent of women are GPC members, with control over the income generated on the land they farm. Even when women do own the land, their yields tend to be lower because they have less access to inputs, training, mechanised equipment, finance and time, contributing to their proportionally lower incomes (Exhibit 7).

EXHIBIT 7

Income for women farmers is proportionally lower than for male counterparts

Number of owners (millions) and annual income (USD millions) ■ Women owners ■ Men owners



SOURCE: FAOSTAT; NBS; Africa Business Review; Mars; Fair Labour Institute; TechnoServe; expert interviews

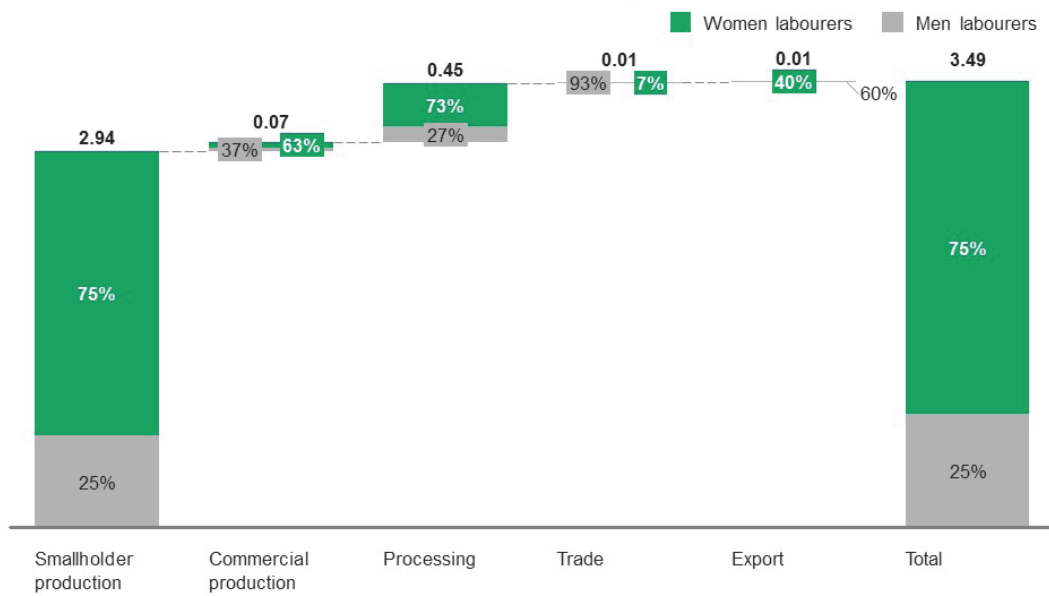
The issue of land tenure is not an easy one to resolve. While policies at a national or even regional level exist to ensure equal access rights to land in most countries, there are often cultural barriers to women owning land. As a result, the policies are rarely implemented on the ground and women are less likely to own land than men. Those women who do gain access to land have to overcome the additional challenges of limited access to inputs and finance as well as high demands on their time from their families—which results in lower levels of productivity than their male counterparts.

Women are also less involved in higher value-add activities. In Ethiopia, for example, women make up 75 percent of the country's 3 million labourers in smallholder coffee production, but are much less heavily represented in trade and export (7 percent and 40 percent respectively) (Exhibit 8). Fewer than 3,000 of the 24,000 processing-company owners, less than 12.5 percent of the total, are women. In addition, women own just seven companies (0.2 percent) of the more than 3,000 coffee trading companies in Ethiopia.

EXHIBIT 8

Women represent 75% of labourers in Ethiopia's coffee value chain

Number of men and women labourers across the value chain, millions¹



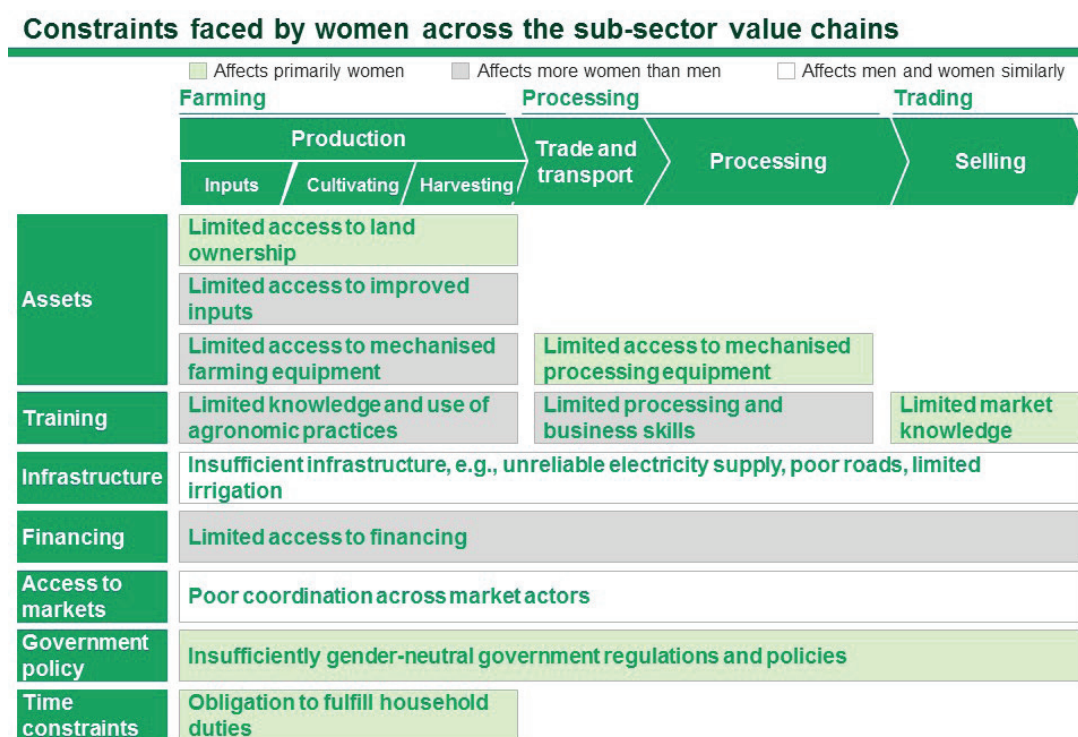
¹ Labourers across all portions of the value chain except in export are seasonal jobs that serve as a portion of the total annual incomes of labourers; there is some overlap as the same people may work in more than one part of the value chain

SOURCE: Field visits; expert interviews; FAOSTAT; USAID Coffee Value Chain Analysis

5 CONSTRAINTS FACED BY WOMEN IN AGRICULTURE

In Africa, women face a number of constraints across the value chain, including structural issues that need to be addressed in each country, e.g., land tenure. Some constraints impact men and women similarly, e.g., insufficient access to infrastructure such as roads, electricity, water and poor coordination across the value chain (Exhibit 9). Other constraints primarily affect women, including time available for farming activities, access to processing equipment and knowledge of markets.

EXHIBIT 9



SOURCE: Expert interviews; field visits

Certain constraints (e.g., lack of access to financing, key operational inputs and mechanised farming equipment, as well as limited knowledge of agronomic practices, lack of training and limited processing and business skills) are felt more acutely by women than men. There are often knock-on effects which compound the disadvantages women face in integrating into the value chain. For example, lack of ownership of assets such as land, limits women’s access to financing where there are strict requirements for collateral. Similarly, time constraints due to domestic and care work mean that women have little capacity to attend training and amass the knowledge critical to improving their productivity.

Finally, government policies targeted at developing specific sub-sectors tend to be gender-neutral and therefore do not actively help women overcome the constraints they face.

Our review of the four sub-sectors revealed that women face five primary constraints:

1. **Lack of ownership of assets.** In the four focus countries, women are legally entitled to own land, but customary law makes this difficult in practice, and women are subject to moderate to severe gender discrimination in land ownership²⁸.
 - *Burkina Faso.* Women in Burkina Faso face numerous restrictions in ownership rights, despite the existence of state policies aimed at ensuring fair access to land for the entire rural population and equal rights to ownership for women under the law. The 2010–2011 Demographic and Health Survey reports that 54 percent of men are the sole owners of a home, compared to 5 percent of women.
 - *Côte d’Ivoire.* Under the Rural Land Act, Ivorian women and men have equal land ownership rights. However, the 2011–2012 Demographic and Health Survey reported that 37 percent of men own land compared to 25 percent of women.
 - *Ethiopia.* An estimated 12 percent of women in Ethiopia own land²⁹, but often their only chance of obtaining land is through marriage. Women who separate from their husbands are likely to lose their houses and property, and, when a husband dies, male family members often claim the land.
 - *Nigeria.* Nigerian women account for 25 percent of landowners of distributed land. Civil law entitles women to own land, but most land is still inherited by men³⁰.
2. **Lack of access to financing.** Generally, domestic banks and foreign investors focus their commercial lending on real estate, construction, telecommunications as well as oil and gas, which have a lower perceived risk than agriculture. This stunts the growth of small and medium agribusinesses and deters global transnational agricultural companies from investing in African agriculture and agribusiness. Attracting anchor investments plays a pivotal role in transforming agriculture, but social safeguards must ensure that farmers are protected, as they become directly exposed to global commodity prices. A downturn in price can result in eviction if the farm is no longer profitable³¹. Women find it even more difficult to get access to capital. They face a number of barriers to accessing finance: most do not own land that can be used as collateral, they often do not have a credit history, and they are sometimes required to obtain consent from their husbands.
 - *Burkina Faso.* While there do not appear to be any legal restrictions on women’s access to bank loans, formal financial institutions consider women “high-risk” applicants because they often do not have financial or material security to put down as collateral.
 - *Côte d’Ivoire.* Access to financial services, including bank loans, is limited for women because most are unable to meet the lending criteria established by banks, such as a title to a house or production of a profitable cash crop. Some banks also require married women to secure their husband’s approval for loans.

- *Ethiopia*. There are no legal restrictions on women’s access to credit in Ethiopia. In practice, however, several barriers exist, including limited awareness of the availability of credit as well as lack of the collateral and economic stability required to access credit. Women do not, therefore, have access to large loans from banks and are more likely to be micro-finance borrowers: 64 percent of micro-finance loans in 2011 were made to women.
 - *Nigeria*. The lack of collateral and credit history restricts women’s access to financial services, including bank loans. Less than one-third of loans in Nigeria are awarded to women, and some financial institutions demand the consent of a woman’s husband before granting a loan. The National Poverty Eradication Programme offers low-interest, business-oriented loans and other micro-credit facilities and vocational training programmes for women, however, access remains low.
- 3. Limited training.** Gender differences in education and training are significant and this extends to training in agriculture and extension services.
- *Burkina Faso*. In Burkina Faso, ginneries provide GPC members with extension services and agronomic training. However, women represent only 2 percent of GPC members. In addition, women members of mixed GPCs may not be informed about training opportunities.
 - *Ethiopia*. Only 5 percent of students enrolled in agricultural programmes in Ethiopia’s post-secondary school system are women. The International Food Policy Research Institute (IFPRI) also estimates a gap in the agricultural extension services provided to women: 20 percent of women farmers receive visits from an agricultural extension agent compared to 27 percent of men farmers.
 - *Nigeria*. Women heads of households have an average of less than two years’ education, while men have an average of three years³².
- 4. Government policy.** Institutional support for the broader value chain has a big impact on the way the agricultural market functions.
- *Pro-agricultural policies* can support the growth and development of the sector. For example, the Nigerian government promoted cassava demand through a policy directive that stipulated 10 percent cassava flour in all baked products.
 - *Targeted agricultural programmes*, such as extension and training programmes, can improve productivity through enhanced farming techniques.
 - *Robust institutions* ensure the necessary support and operating environment for farmers. These institutions can be government agencies, NGOs, agriculture-related institutes or firms.
 - *Links to global and regional markets* are important to ensure the availability of inputs and the

ability to export products to a broader market. Governments and other institutions provide these links by promoting better access to international markets.

Policymakers should place high importance on the intersection of their domestic policies, regulatory frameworks and the demands women face in trying to participate equitably in regional and global agricultural value chains. However, most sub-sector policies are gender-neutral, and to date, agricultural policy that supports women—where it exists—has not always been effectively implemented.

- *Burkina Faso*. In 2009, the National Assembly passed a law reserving a minimum 30 percent quota for women’s inclusion in all national representative boards, such as electoral lists and parliament members. This law aims to improve the role of women in decision-making roles, but it has not yet been enforced because the decree implementing this directive has not been voted on.
 - *Ethiopia*. The Agricultural Transformation Agency (ATA) is working with its staff and partners to expand their knowledge and understanding of gender equality issues and approaches to empowering women, but policies that target women farmers have yet to be adopted.
 - *Nigeria*. The Federal Ministry of Agriculture and Rural Development’s Department of Gender and Youth in Agriculture is promoting gender equality in agriculture; however, some of its policies and programmes, e.g., the Presidential Initiative on Cassava, do not have a gender-specific component.
- 5. Time constraints.** Women are often burdened with a disproportionate share of unremunerated care and domestic work. According to UN WOMEN, women spend one to four hours a day less than men on market-related or wage-earning activities because of their domestic responsibilities. This is particularly true on rural smallholder farms where the opportunity for external waged labour is lower³³. As a result, women usually have less time to spend on farming activities and are therefore less productive.
- *Burkina Faso*. Most Burkinabé women have to work on the family land and complete family chores before looking after their own land³⁴.
 - *Ethiopia*. It is estimated that Ethiopian women farm managers spend almost 9 hours a week less on agricultural work than men farm managers due to the demands on their time for domestic work.

As a result of these constraints as well as limited access to inputs, crop yields for women are 20–40 percent lower than for men in the four focus countries. In Burkina Faso, women cotton farmers have yields that average 20 percent lower than those of men; in Nigeria, women cassava farmers are 20–30 percent less productive than men farmers, largely due to limited access to productive inputs and human capital³⁵. In Ethiopia, women farmers are 20–25 percent less productive; in Côte

d'Ivoire, women-owned cocoa farms are roughly 40 percent less productive than those that are owned by men³⁶.

Women could increase the yields on their farms by an estimated 20–30 percent if they had the same access to productive resources as men³⁷.

6 OPPORTUNITIES FOR WOMEN IN AGRICULTURE

Women make up almost half of the agricultural workforce, primarily active within the small-scale and subsistence sector, but they are under-represented in land ownership and income. This study identified five major constraints that can limit women's productivity and their full inclusion in the agricultural economy: lack of access to assets, lack of access to financing, limited training, government policy and time constraints.

Actions that fall into three cross-cutting themes could begin to address the specific constraints that women face. The themes are:

- **Increase the number of women entrepreneurs in large-scale agribusinesses by providing training and access to financing, and by improving market links.** In cocoa, cassava and coffee, we have identified opportunities to create large, women-owned agribusinesses in higher value-add activities that are downstream on the value chain.
- **Increase incomes by improving productivity and training women in core business skills.** This would ensure that women get better access to the income generated as a result of their work by improving productivity for smallhold farmers in all four sub-sectors and for small-scale processors in cassava. It would also expand women-inclusive cooperative programmes in cocoa, cotton and coffee.
- **Increase access to niche markets by marketing products from women-led value chains** such as cocoa and coffee products grown and produced by women and by increasing the participation of women in organic-cotton farming.

Five actions and interventions can address these themes: training, financing, enhancing market links, expanding cooperative programmes and increasing access to inputs.

	Increase the number of women entrepreneurs in large-scale agribusinesses	Increase incomes by improving productivity and training women in core business skills	Increase access to niche markets by marketing products from women-led value chains
1. Training	✓	✓	✓
2. Increasing access to inputs	✓	✓	✓
3. Financing	✓		✓
4. Enhancing links to markets	✓		✓
5. Expanding cooperative programmes		✓	

These actions offer a number of investment and advisory opportunities for AfDB:

- **Provide technical assistance to farmers through the Technical Assistance Trust Fund.** Technical assistance is critical for all of the cross-cutting themes—growing the number of agribusiness entrepreneurs, supporting equitable remuneration of women, and developing women-themed products. An example of the support technical assistance can provide to women agribusiness entrepreneurs is increasing access to inputs and best practices. For example, in cocoa, this could mean facilitating the adoption of chemical and fertiliser best practices and developing nurseries to supply farmers with improved varieties of cocoa saplings. Technical assistance can also support women through training opportunities to improve productivity. Training courses should be set up thoughtfully to ensure they provide a meaningful opportunity that women can take advantage of (e.g., the training schedule should accommodate women’s domestic chores and duties). The training should be a tailored offering that covers the technical requirements of the most relevant portions of the value chain (e.g., farming, processing, marketing, packaging and trading) and basic financial management and business skills, as appropriate. In addition to training, technical assistance can take the form of women-inclusive cooperative programmes that establish women as co-owners. Training is also essential for increasing access to niche markets through the production and marketing of products from women-led value chains. For example, in order to help women entrepreneurs create chocolate and cocoa products that can be branded as coming from women-led value chains and build on current artisanal chocolate production in Côte d’Ivoire, women may need further training in chocolate production and processing. Provide financing for women entrepreneurs.
- **Provide financing for women entrepreneurs.** Providing financing for women entrepreneurs is relevant for all of the cross-cutting themes—growing the number of large-scale agribusiness entrepreneurs, supporting equitable remuneration of women and developing products from women-led value chains. ENAT Bank in Ethiopia provides a case study of successful financing for women entrepreneurs: ENAT Bank is 64 percent owned by women and established a women’s unit to facilitate access to financing and financial education for women³⁸.

Financing options are also critical to supporting women entrepreneurs in large-scale agribusiness. In cocoa, which has a long growth period, this could take the form of funding through loans collateralised against production or that otherwise accommodate the extended growing periods of cocoa. Financing options for women include loans guaranteed against future earnings from agricultural products, with little or no collateral required.

Providing financing to members of women-inclusive cooperatives can be used to establish and support women as co-owners. This would allow women to get better access to inputs and machinery which would, in turn, improve productivity. AfDB could partner with agricultural development finance institutions (e.g., Bank of Agriculture in

Nigeria), by providing them with technical advisory on their lending practices to women. Finally, financing can support the creation of women-branded and owned agribusinesses. For example, in order to enable the creation of large women-owned coffee businesses in high value-capture activities, support is required on multiple fronts. In addition to targeted business training and linkage to markets, financing is a key enabler. Financing in this case could be provided through commercial bank guarantees.

- **Establish market links through the private sector.** Establishing market links through the private sector is most relevant for increasing the number of women entrepreneurs in agribusiness and for developing products branded as coming from women-led value chains. Global market links are critical for agribusiness entrepreneurs to tap into new markets and expand into large-scale enterprises and then benefit from economies of scale. Market links are also pivotal in order to develop products branded as coming from women-led value chains, as niche markets are willing to pay a premium for these products (e.g., artisanal women-branded chocolate from Côte d'Ivoire) are largely international. Establishing these links early is crucial to ensure that the quality and phytosanitary standards required for export are built into the business.

In order to take advantage of global market links, the supply chain must be able to support the export of goods. To ensure this, small producers must be linked to industrial-scale processors, and these processors must then be linked to large retailers. Women should be involved in each of these links. For example, in Burkina Faso, having a direct link with the cotton companies would increase access to inputs, agronomic knowledge and control of crop revenues for women.

These actions should not be viewed as mutually exclusive but rather as complementary to one another. For example, a bundle could be offered that includes a loan segment, a grant, and a training course on the specific sub-sector's agribusiness. Another example could be engaging technical partners to donate machinery to cooperatives or groups of farmers who are receiving direct loan assistance in order to help them overcome the initial hurdle of capital outlay. In addition, AfDB could pursue financial sector reforms by reviewing lending constraints caused by limited land tenure.

To make these a reality, each of these opportunities must be investigated in more depth to understand the relevance and constraints for each country.

There are existing initiatives AfDB could leverage to support the economic empowerment of women through equitable participation in each agricultural value chain. For cocoa, potential partners include the Conseil du Café-Cacao and TechnoServe. For cotton, potential partners include the production union and the three major cotton companies in Burkina Faso. For cassava, potential partners include the International Institute of Tropical Agriculture IITA and the Federal Ministry of Agriculture and Rural Development. For coffee in Ethiopia, potential partners include TechnoServe and the Hans R. Neumann Foundation.

In addition to the three direct opportunities for AfDB to support, it could also play an indirect role in addressing structural issues (e.g., land tenure and gender-neutral agricultural policy) through advocacy and engagement with governments. Specifically, to support the equitable participation of women in agricultural value chains, governments should:

- Adapt **legislation to incorporate gender sensitivity** in promoting the inclusion and empowerment of women, especially with respect to land tenure policy;
- Create and facilitate the **opportunity for foreign-trade delegations and firms to connect with women producers and processors** to provide guidance on requirements and create direct business relationships;
- Run **women-only extension services** in sub-sectors; and
- Develop **targeted infrastructure to support integrated value chains**. For example, an adequate transportation infrastructure is required to link local producers to global markets.

7 COCOA

Cocoa was selected for this study based on its significance in terms of agricultural production and export across Africa and its fit with the AfDB's OSAN Agriculture Sector Strategy 2010–2014.

7.1 Executive summary

The global cocoa market is set to hit a turning point as demand is on track to outpace supply by 2020. Production has remained relatively flat, growing at 1.8 percent per year since 2003. As a result, the price of cocoa has increased 3.4 percent per year since 2004, following its collapse in the early 2000s.

Africa is the world's largest producer of cocoa, accounting for approximately two-thirds of global production. However, the majority of African cocoa is exported unprocessed. The region's biggest producers—Côte d'Ivoire, Ghana and Nigeria—produce 1.4 million, 835,000 and 367,000 tonnes respectively per year. Despite yields comparable to the global average of 0.5 tonnes per hectare, the future productivity of the large African producers is in question.

In Côte d'Ivoire, the country responsible for one-third of the world's cocoa, yields declined 15 percent between 2005 and 2010, as aging tree stocks passed their peak yields. The widespread lack of inputs (i.e., improved seed varieties, crop protection and fertiliser) and poor agricultural practices mean that the country cannot meet rising demand or even sustain current production levels. Declines in soil fertility and yield per tree combined with lack of access to capital and credit are constraints for cocoa farmers. In addition, the lack of cooperation between producers and exporters results in inconsistent cocoa bean quality, while insufficient downstream processing capacity limits exports of processed cocoa, which accounted for only 34 percent of total cocoa exports in 2013.

As the largest agricultural crop in Côte d'Ivoire, cocoa provides a livelihood for about 3.6 million of the country's 20 million people. Women own 25 percent of the country's cocoa plantations and make up 68 percent of the labour force. Many work on family farms where they have little control over the income generated and are largely unremunerated for their labour. In addition, women seldom participate in cooperatives. They are mainly involved at the beginning of the production stage and again following harvest in primary processing.

We identified three major constraints for women in cocoa in Cote d'Ivoire. In production, women who do not own a cocoa plantation but instead work on family farms are mostly unremunerated, as cash crops such as cocoa are traditionally within the purview of their husbands. In addition, the majority of women are excluded from cooperatives and their associated benefits as membership usually requires land ownership. Finally, the broad exclusion of women in aggregation, trade and transport activities and their under-representation as intermediaries prevents them from moving further downstream into sales.

Three potential opportunities have emerged to increase women's empowerment and economic gains in the cocoa sub-sector:

- Develop and help promote women entrepreneurs in large-scale agribusinesses along the value chain, especially in areas where women are already involved;
- Help women entrepreneurs to create chocolate and cocoa products branded as coming from women-led value chains to target niche markets, and build on current artisanal chocolate production in Côte d'Ivoire; and
- Expand women-inclusive cooperative programmes that increase productivity and establish women as co-owners.

7.2 Global and African trends

7.2.1 Global demand and supply

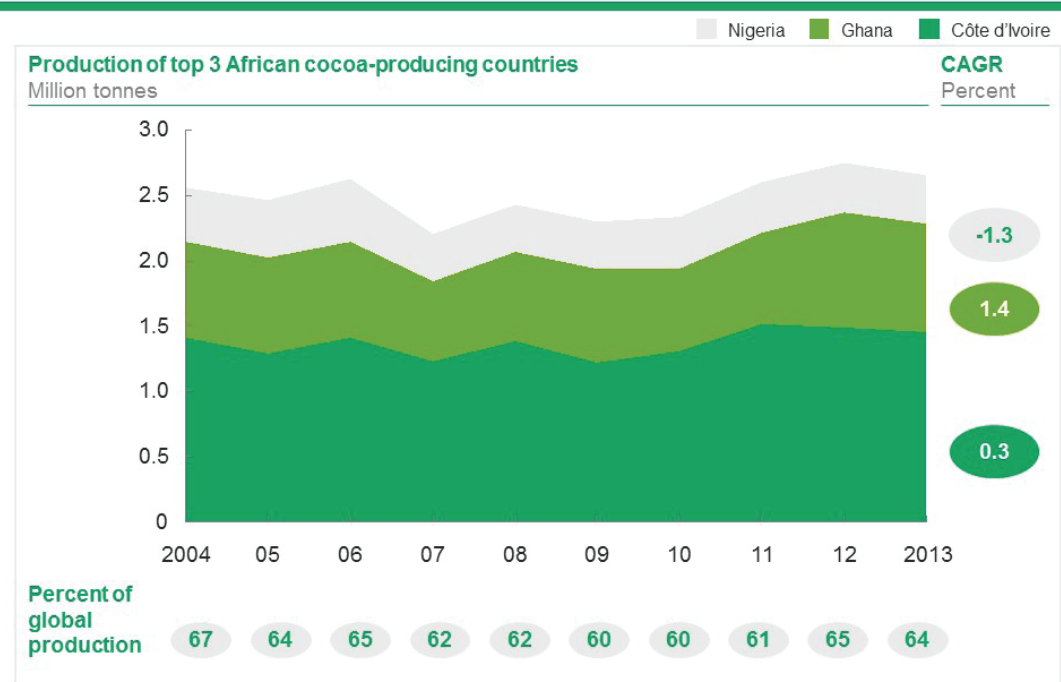
The world's demand for cocoa is expected to continue to rise steadily at 5 percent per year³⁹, driven by increasing consumption in fast-growing emerging economies and changing consumer preferences in developed countries where chocolate consumption is well established. Chocolate is becoming more popular in China, where annual consumption has doubled since 2012 to 271,000 tonnes⁴⁰. In India, demand is similarly expected to increase, as median incomes rise⁴¹. Furthermore, consumer demand for higher-cocoa-content chocolate in developed markets is growing due to the perceived health benefits deriving from the high antioxidant and flavonoid content⁴².

Despite this increase in demand, cocoa production has remained flat, with a growth of 1.8 percent per year between 2003 and 2013⁴³. Individual producers are reluctant to invest in increased production in the face of fluctuating global prices⁴⁴, and governments are hesitant to increase supply dramatically, especially in Côte d'Ivoire, as higher production volume would likely drive down prices⁴⁵. These factors suggest that the global cocoa sub-sector will soon reach a turning point; demand is forecast to outpace supply with estimates of a deficit ranging from 100,000 to 1 million tonnes by 2020⁴⁶.

Africa is central to the cocoa sub-sector. Its largest producers—Côte d'Ivoire, Ghana and Nigeria—have consistently supplied around two-thirds of the world's cocoa for the last 10 years⁴⁷. In 2013, they accounted for 34 percent, 18 percent and 8 percent of global production volume and produced 1.449 million, 835,000 and 367,000 metric tonnes, respectively⁴⁸. Closer analysis reveals the challenges the sub-sector is facing globally. While Ghana is increasing its production at an annual growth rate of 1.4 percent⁴⁹, Côte d'Ivoire and Nigeria are falling behind with a production volume change of 0.3 percent and -1.3 percent per year, respectively⁵⁰ (Exhibit 10).

EXHIBIT 10

Africa's cocoa production has remained approximately flat since 2004



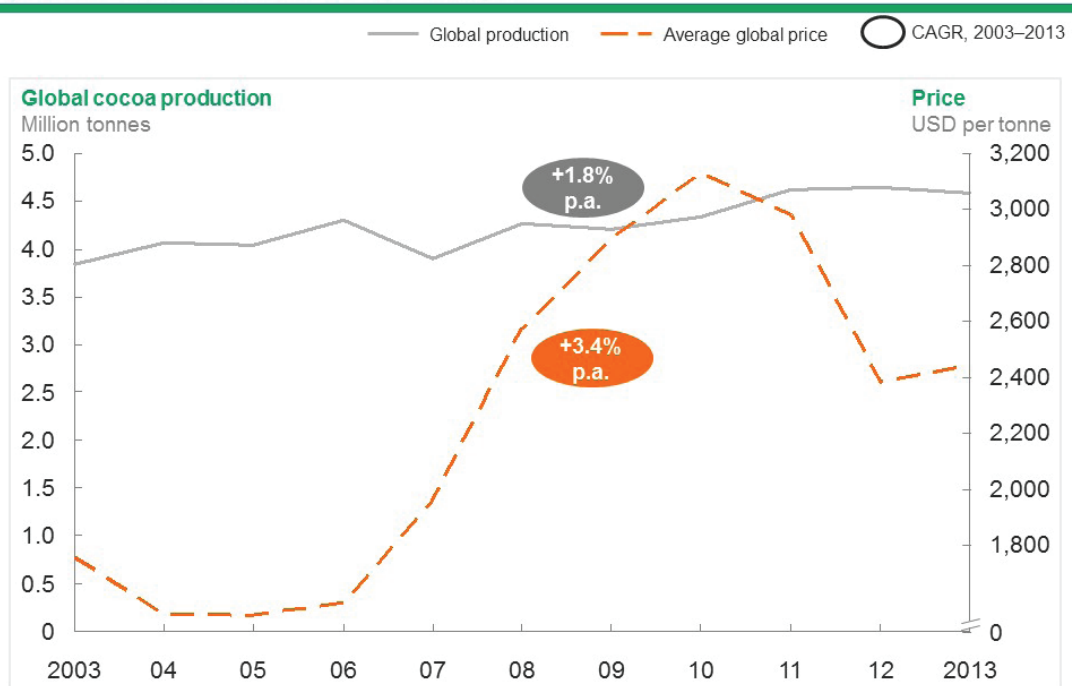
SOURCE: FAOSTAT; expert interviews

7.2.2 Prices

In the early 2000s, the sub-sector saw precipitous price declines following the liberalisation of the industry in many cocoa-producing countries. Relatively stable production against a backdrop of increased demand has led to a long recovery for producers. As a result, global prices have increased 3.4 percent per year since 2003 (Exhibit 11)⁵¹.

EXHIBIT 11

Cocoa prices have increased by 3.4% p.a. between 2003 and 2013, while production has increased by 1.8% p.a.



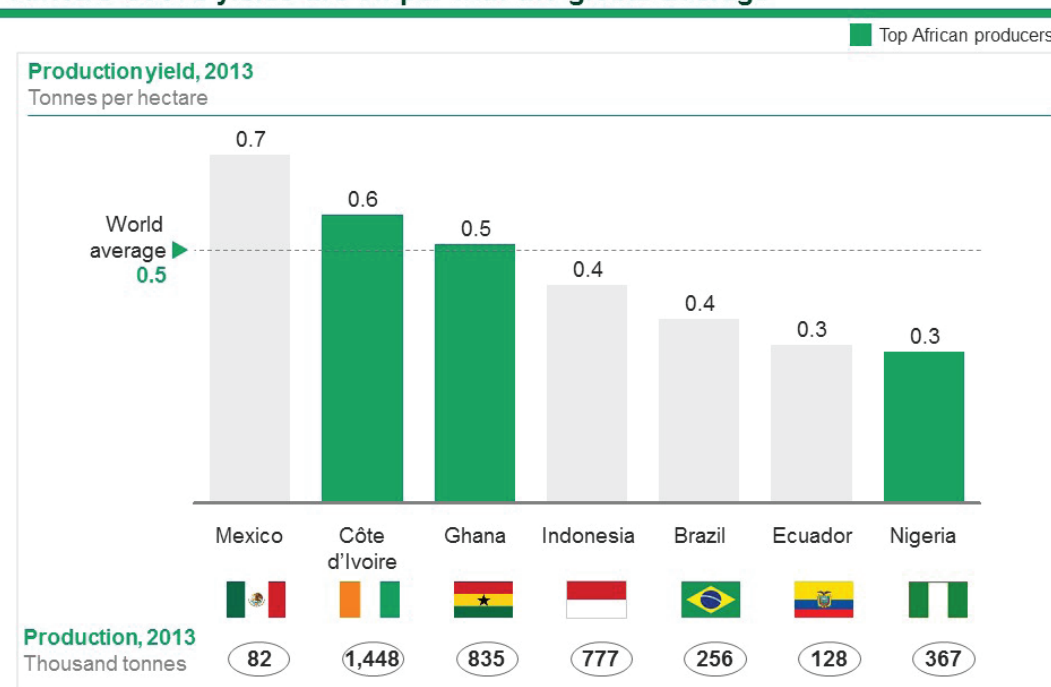
SOURCE: FAOSTAT; expert interviews; International Cocoa Organisation; African Business Review

7.2.3 Yields

Yields in the major African producer countries are on par with the global average of 0.5 tonnes per hectare (Exhibit 12), but their future productivity is in question⁵². The largest producer, Côte d'Ivoire, currently produces 0.6 tonnes per hectare, but yields declined by 15 percent from 2005 to 2010, as aging tree stocks passed their peak yields⁵³. High-yield variety seedlings are available, sometimes free of charge, but farmers are reluctant to cut down even low-producing trees⁵⁴. Research into improved-variety clones for grafting—which will not require farmers to cut down old trees—has been conducted but will not be made available until it is deemed safe from a crop protection perspective by the World Agroforestry Centre and other institutions⁵⁵. Adding to the declining yields, a period of intense economic hardship precipitated by the global cocoa price collapse left cocoa farmers with insufficient capital to invest in established inputs to improve their yields, such as fertiliser and crop protection products⁵⁶.

EXHIBIT 12

Africa's cocoa yields are on par with the global average



SOURCE: FAOSTAT; TechnoServe; African Business Review; Financial Times

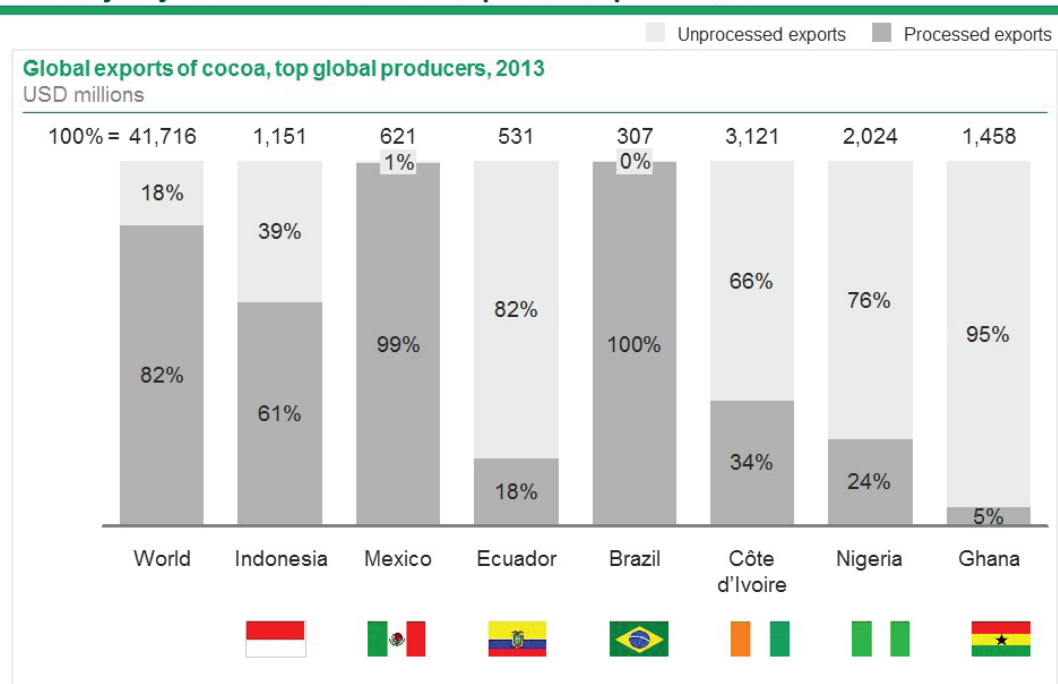
7.2.4 Exports

Global exports of cocoa and cocoa-related products reached USD 41.7 billion in 2013. Processed cocoa mostly from Europe and North America accounted for 82 percent⁵⁷ of total exports. While Côte d'Ivoire is the world's largest producer of semi-finished cocoa products, the majority of African cocoa is still exported unprocessed: 66 percent, 76 percent and 95 percent for Côte d'Ivoire, Nigeria and Ghana, respectively (Exhibit 13)⁵⁸. Other countries with higher rates of processing tend to operate further down the value chain. Both Mexico and Brazil have large domestic consumer bases for chocolate and can sustain significant downstream value chain activity⁵⁹; they export 99 percent and 100 percent of their cocoa processed (respectively) as chocolate products. Similarly, 61 percent of Indonesia's cocoa goes into processed exports⁶⁰. By comparison, West Africa's processed exports primarily take the form of inputs for chocolate-making (e.g., cocoa butter)⁶¹.

Less than 2 percent of cocoa from Côte d'Ivoire, Ghana and Nigeria is exported to other African countries, Tunisia, Algeria and South Africa being the top importers.

EXHIBIT 13

The majority of African cocoa is exported unprocessed



SOURCE: FAOSTAT; Bloomberg

7.3 Regional and global trade flows—ECOWAS and COMESA

7.3.1 ECOWAS regional and global trade flows

ECOWAS' producers export limited quantities of processed cocoa (Exhibit 13). In 2013, 75 percent of their cocoa exports were in the form of unprocessed, roasted cocoa beans, with the remainder exported as cocoa butter. Côte d'Ivoire has the largest processed exports (34 percent of its exports), compared to Nigeria (24 percent) and Ghana (5 percent). This is due to the presence of a Nestlé factory in Abidjan which roasts and grinds cocoa beans.

Cocoa from Africa is sold mainly to Europe and Asia, where secondary processing occurs. The Netherlands, Barbados and Germany are ECOWAS' largest cocoa trading partners (Exhibit 14). Côte d'Ivoire's primary cocoa trading partners were the US, Netherlands and Germany, accounting for 21 percent, 19 percent and 14 percent⁶² of cocoa exports, respectively. Ghana's top three export destinations for cocoa beans were the Netherlands (17 percent), Malaysia (11 percent) and France (9 percent). Barbados (66 percent) and the Netherlands (14 percent) are Nigeria's top export destinations for cocoa beans.

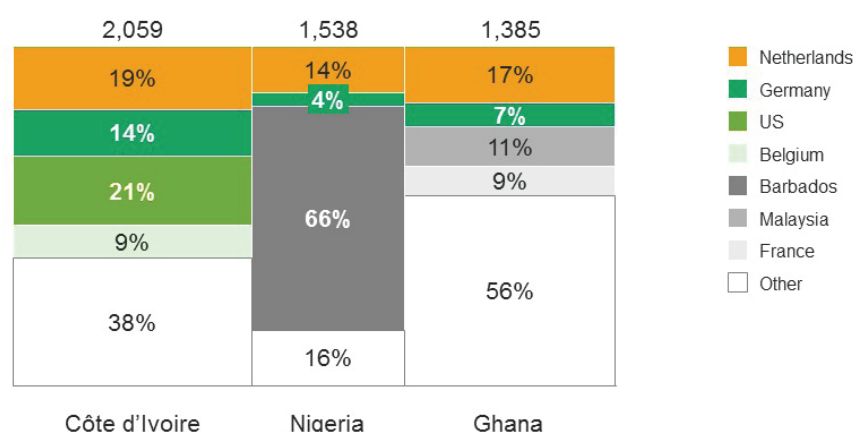
Less than 2 percent of cocoa from Côte d'Ivoire, Ghana and Nigeria is exported to other African countries, Tunisia, Algeria and South Africa being the top importers.

EXHIBIT 14

The Netherlands, Barbados and Germany are the largest export destinations for ECOWAS cocoa beans

Export destinations for cocoa beans, top 3 ECOWAS cocoa-producing countries, 2013

USD millions



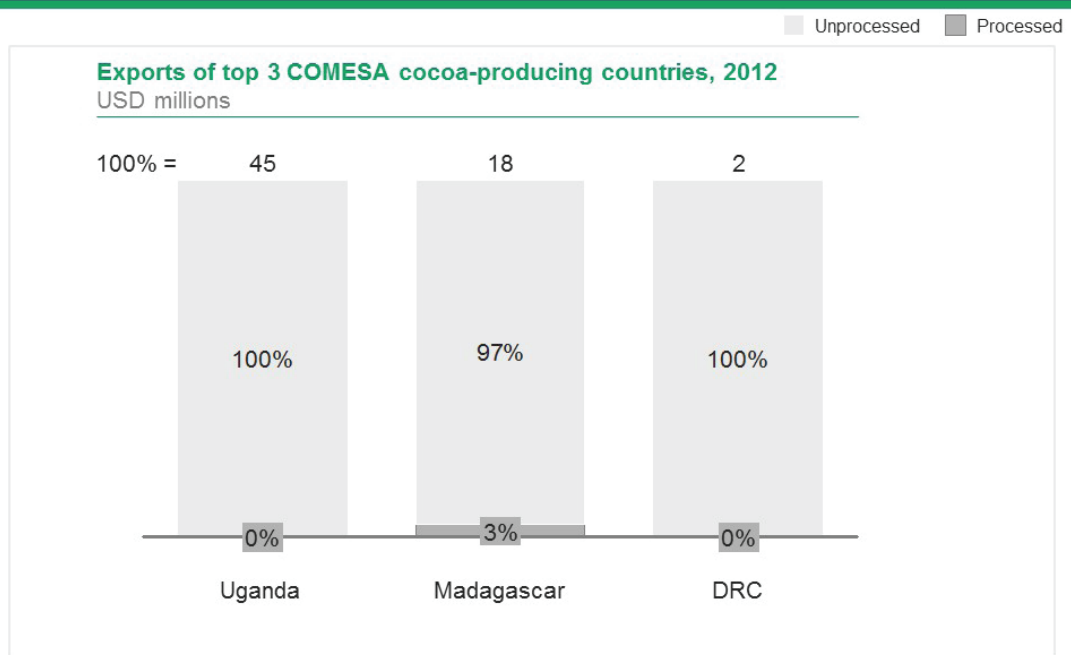
SOURCE: FAOSTAT; UN COMTRADE; MIT

7.3.2 COMESA regional and global trade flows

COMESA's cocoa producers also export only limited quantities of processed cocoa (Exhibit 15). More than 97 percent of their cocoa exports are in the form of roasted cocoa beans, with the remainder as cocoa butter.

EXHIBIT 15

COMESA's cocoa producers have limited processed exports



SOURCE: FAOSTAT

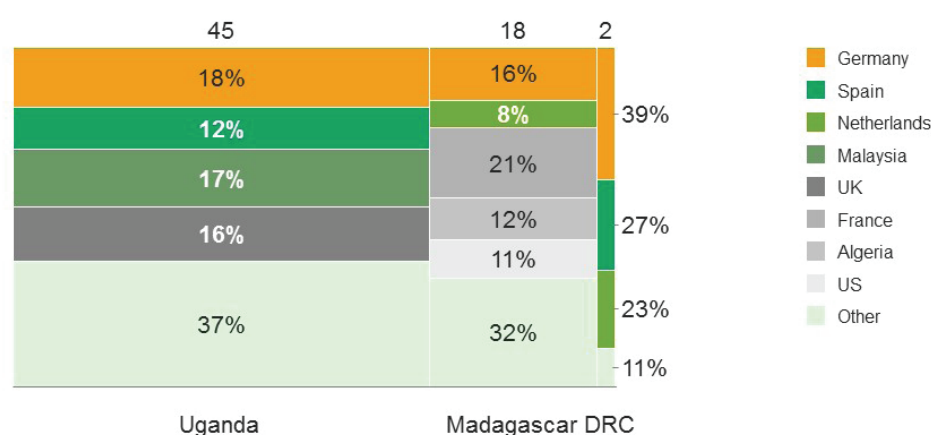
Germany, Malaysia and the UK are Uganda's largest cocoa trading partners, accounting for 18 percent, 17 percent and 16 percent of cocoa bean exports, respectively (Exhibit 16).

EXHIBIT 16

Germany is the largest export destination for COMESA cocoa

Exports destinations for top 3 COMESA cocoa-producing countries, 2012

USD millions



SOURCE: FAOSTAT; UN COMTRADE; MIT

7.4 Government support for the sub-sector

Overall, the governments of the largest African cocoa producers have developed clear strategies for the sub-sector (though these strategies are not specific to women).

Côte d'Ivoire's prosperity is significantly affected by the future of the sub-sector: cocoa sustains nearly 3.6 million people, including both owners and labourers, in smallholder farming. These producers account for 90 percent of the country's cocoa production⁶³. Given its importance to the nation's economy, the government has launched a series of sector reforms, including establishing a centralised industry body (Le Conseil du Café-Cacao) responsible for setting a minimum guaranteed price to producers and making targeted infrastructure investments⁶⁴. There is also an established government strategy for the sector, 2QC (standing for quality-quantity growth), with which all programmes in both the public and private sectors are aligned⁶⁵.

In Ghana, the sub-sector is centrally administered through a government entity, the Ghana Cocoa Board (Cocobod), which sets a fixed price (with the exception of fair trade, organic or high-quality

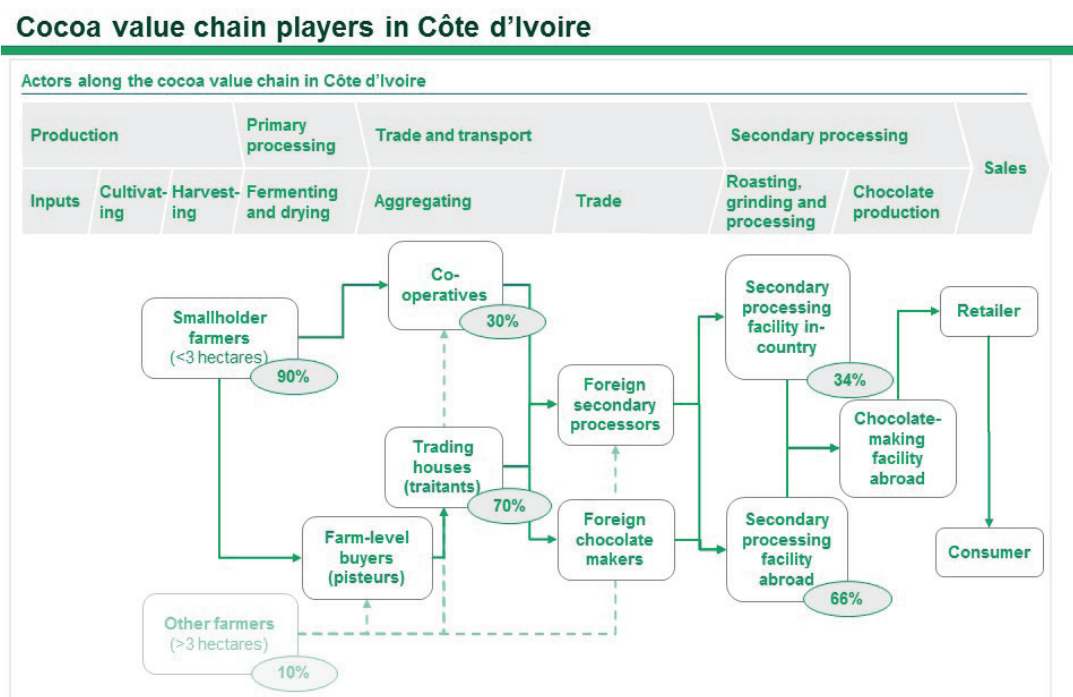
beans), conducts research into crop protection and sells improved seed varieties. The Board is the exclusive exporter of Ghanaian cocoa and maintains minimum standards of quality throughout the value chain, utilising a licensing process for approved traders⁶⁶.

In 1986, Nigeria dismantled the Cocoa Marketing Board that had regulated its cocoa industry, set prices and provided subsidies. Cocoa is dwarfed by the petroleum industry, but Nigeria has begun to provide support to the sub-sector in the form of subsidised inputs (e.g., improved seed varieties, fertilisers and crop protection chemicals) and training in best practices. The Ministry of Agriculture aspires to increase production to 1 million tonnes per year by 2018⁶⁷.

7.5 Value chain players

While value chain activities do not vary greatly from country to country, the structure of the players at each stage may differ. In Côte D'Ivoire, for example, the cocoa value chain depends on intermediaries who create the link between producers and exporters (Exhibit 17).

EXHIBIT 17

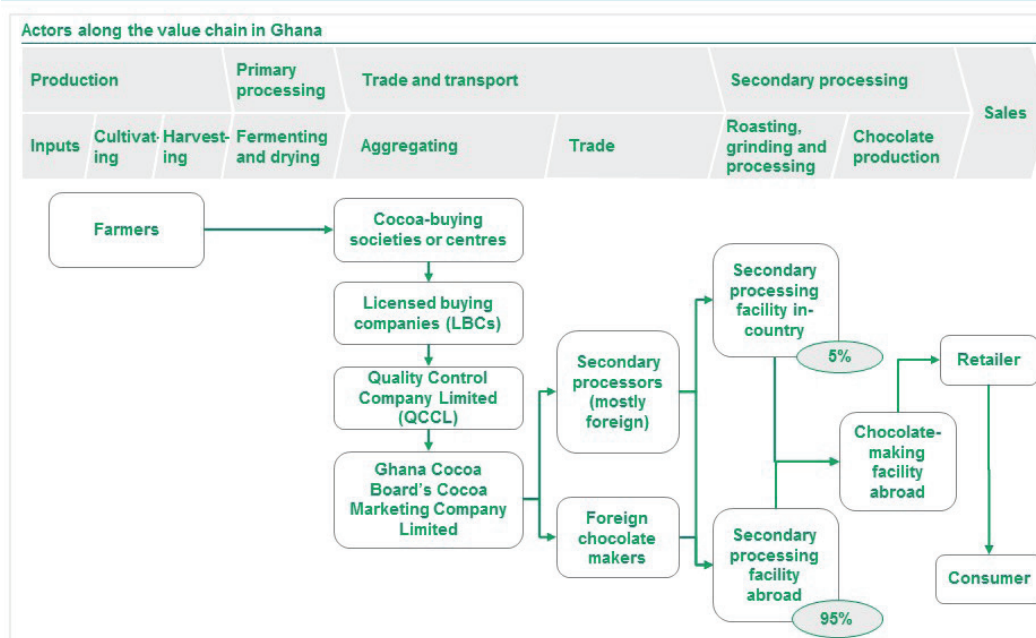


SOURCE: FAOSTAT; expert interviews

In Ghana, the flow of cocoa through the value chain is streamlined by a single exporting agency, the Cocobod, and its licensed buying entities (Exhibit 18).

EXHIBIT 18

Cocoa value chain players in Ghana



SOURCE: FAOSTAT; expert interviews

7.6 Constraints in the cocoa sub-sector

7.6.1 Cross-cutting issues

The lack of capital and access to credit inhibits long-term investment in productive assets. Micro-finance options are limited, largely because the length of time it takes to realise returns on investment in cocoa production makes the repayment period much longer than for other crops that may generate income in a matter of months⁶⁸. These financial constraints prevent producers from investing in improved inputs to increase yields (e.g., replacing trees with high-yield, pest-resistant varieties and applying pesticides, fungicides, herbicides or fertilisers) or in mechanisation (e.g., mechanical slashers) to improve efficiency⁶⁹. Furthermore, the financial constraints make it difficult for farmers who want to invest in expanding their economic activity across the value chain, for example, by developing nurseries of improved-variety seedlings for sale to other farmers or moving downstream into aggregation and direct trade with exporters.

In Côte d'Ivoire, there is a dependence on intermediaries to create the link between producers and eventual exporters. Only about 30 percent of Ivoirian cocoa farmers sell their beans to a cooperative, while the rest sell to other intermediaries such as small pisteur traders or larger traitant trading enterprises⁷⁰. The intermediaries' control over aggregation and trade means that 3–5 percent less cocoa revenue accrues to farmers than in neighbouring Ghana⁷¹. The prevalence of intermediaries makes it difficult for exporters to signal their supply and bean quality preferences to producers⁷², and harder to compensate Ivoirian farmers based on differentiated bean quality⁷³.

As a result of these challenges, many farmers have abandoned cocoa production or have left agriculture altogether. Throughout West Africa, youth are leaving rural villages for more urban areas where the economic opportunities are perceived to be greater⁷⁴.

7.6.2 Production

African cocoa production faces various challenges and the experience in Côte d'Ivoire is instructive. On average, the stock of cocoa trees in Côte d'Ivoire is more than 25 years old, beyond its peak pod yield levels and of inferior variety⁷⁵. Although improved (high- and rapid-yield, pest-resistant) varieties have been developed, only about 0.1 percent of the country's 2 billion cocoa trees have been replaced by improved seedlings⁷⁶. Only about 40 percent of Ivoirian cocoa farmers can afford other inputs such as crop protection and fertiliser, which costs about 10 times more than crop protection⁷⁷. As a result, soil fertility has declined as nutrients are not regularly replaced. In addition, 30–40 percent of crop loss is caused by pests⁷⁸, particularly in the form of black pod fungal disease and swollen shoot virus disease.

Ongoing cocoa plantation maintenance is also a challenge. Less than 20 percent of Ivoirian cocoa farmers employ effective pruning practices⁷⁹, e.g., removal of excess branches to promote ventilation and control pests, and maintenance of optimal tree height to stimulate flower and pod production⁸⁰. One reason for this is that effective pruning requires both training and consistent follow-up to achieve results⁸¹. Also, less than half of Ivoirian cocoa producers employ any form of effective weeding⁸², and very little in production has been mechanised, with the exception of mechanical slashers in weed control⁸³ and crop protection sprayers⁸⁴. As Ivoirian producers largely lack the financing for these options, the vast majority use a manual form of weeding (using either a machete or hoe), although 10–30 percent can afford herbicides⁸⁵. By contrast, in Ghana, the centralized Cocoa Board, Cocobod, has a regular tender with a private-sector crop protection company and deploys teams of sprayers to treat farms.

Harvesting is labour-intensive and employing best practices can be challenging. Less than two-thirds of Ivoirian cocoa producers, for example⁸⁶, practice phytosanitary harvest or the careful removal of diseased pods or timely harvesting (neither when the pod is unripe nor too ripe), or use of adequate tools that are cleaned regularly⁸⁷.

7.6.3 Primary processing

In the initial post-harvest processing, which occurs close to the cocoa farm, only 30–38 percent of Ivorian farmers implement the practices⁸⁸ that have the most impact on the eventual quality of the cocoa⁸⁹. These include fermenting the beans for the appropriate amount of time before drying and controlling excess humidity throughout the process⁹⁰.

7.6.4 Trade and transport

African rural producers continue to face difficulties in accessing input and output markets due to insufficient and poor-quality infrastructure. Agricultural infrastructure development in most sub-Saharan African countries is lower than in other regions of the world, making it one of the main obstacles to productivity⁹¹. Hence, heavy intermediation in trade and transport is a major constraint. Producers are cut off from buyers, as they are almost entirely dependent on intermediaries to sell their beans⁹². These intermediaries verify only a minimum level of quality before purchasing the beans⁹³ and do not differentiate compensation to farmers according to quality of their product. As a result, farmers are incentivised to compromise quality by reducing the fermentation process to sell their beans as quickly as possible⁹⁴.

Another constraint at this stage of the value chain is the lack of adequate storage facilities. Good transport, storage infrastructure and surplus income would allow farmers to smooth the sale of their production volume, i.e., they could afford to wait to sell their beans at the optimal price⁹⁵.

7.6.5 Secondary processing and sales

Côte d'Ivoire is the leading cocoa bean roaster in the world, but processes just 30 percent of its domestic production⁹⁶. Secondary processing is controlled largely by foreign entities, and sale of the end products happens almost entirely outside the country⁹⁷. This downstream end of the value chain is highly concentrated, with the big five cocoa exporters purchasing 50 percent of West Africa's cocoa production⁹⁸. Similarly, the five big chocolate companies—Hershey, Nestlé, Cadbury (now owned by Kraft), Mars, and Ferrero—account for more than one-third of global sales⁹⁹.

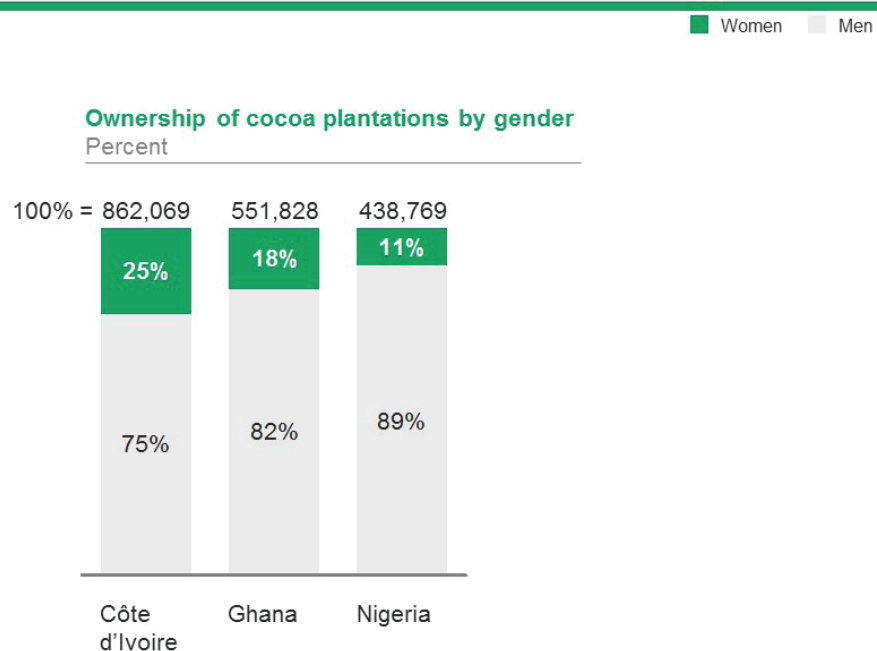
If African producers were to move downstream into chocolate-making, the need to maintain low ambient temperatures in the storage of chocolate would be a significant expense. It would have an impact on the cost structure for chocolate-making (i.e., increasing the capital costs for adequate temperature control) as well as the types of products that could be made (e.g., lower-quality additives that create a higher melting point)¹⁰⁰. Without sizeable domestic or regional consumer demand, it may be challenging from a cost perspective for African countries to move into the final processing stage of the value chain at significant scale¹⁰¹.

7.7 The role of women in cocoa

Across the major African producers—Côte d'Ivoire, Ghana and Nigeria—around 4.3 million women work in the cocoa sub-sector¹⁰². With women's cocoa plantation ownership at 25 percent¹⁰³, 18 percent¹⁰⁴, and 11 percent¹⁰⁵ respectively (Exhibit 19), they largely contribute labour to farms they do not own or where they have no control over the income generated.

EXHIBIT 19

Women in Côte d'Ivoire, Ghana and Nigeria own 25%, 18% and 11%, respectively, of cocoa farms



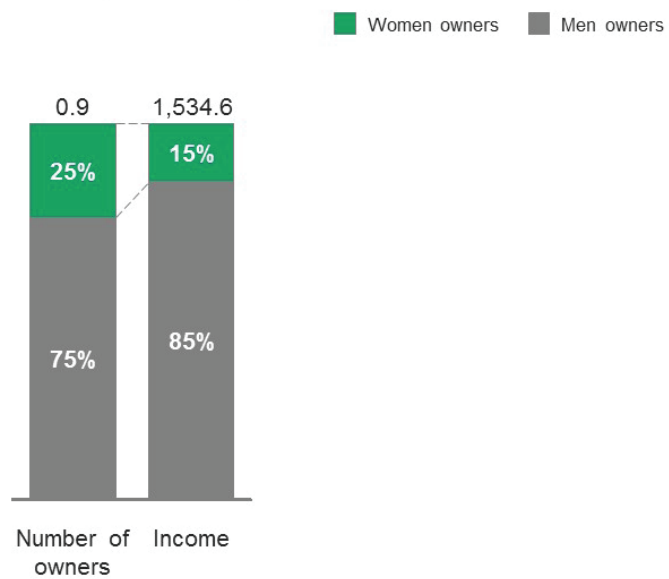
SOURCE: Expert interviews; FAOSTAT; Mars Sustainable Cocoa Initiative; Fair Trade Association; Earth Security Index; African Business Review; AESS

Women in Côte d'Ivoire who own their own plantations earn about USD 1,000 per year (about USD 700 less than men) because their plantations tend to be smaller and their utilisation of inputs, such as fertiliser, is lower¹⁰⁶. Women labourers primarily provide support to their husband's or their family's farms. As such, women receive only nominal compensation or no regular compensation at all¹⁰⁷. One estimate of annual nominal compensation¹⁰⁸ suggests that women working on farms they do not own collectively earn just USD 30 million out of the USD 1.5 billion generated in farm revenue per year. Even when accounting for the revenue accruing to women who own their farms (approximately USD 233 million), women only capture around 15 percent of total revenues, despite owning 25 percent of productive cocoa farms^{109, 110} (Exhibit 20).

EXHIBIT 20

Women own 25% of cocoa farms in Côte d'Ivoire but earn just 15% of the income

Number of owners (millions) and total income (USD millions), Côte d'Ivoire



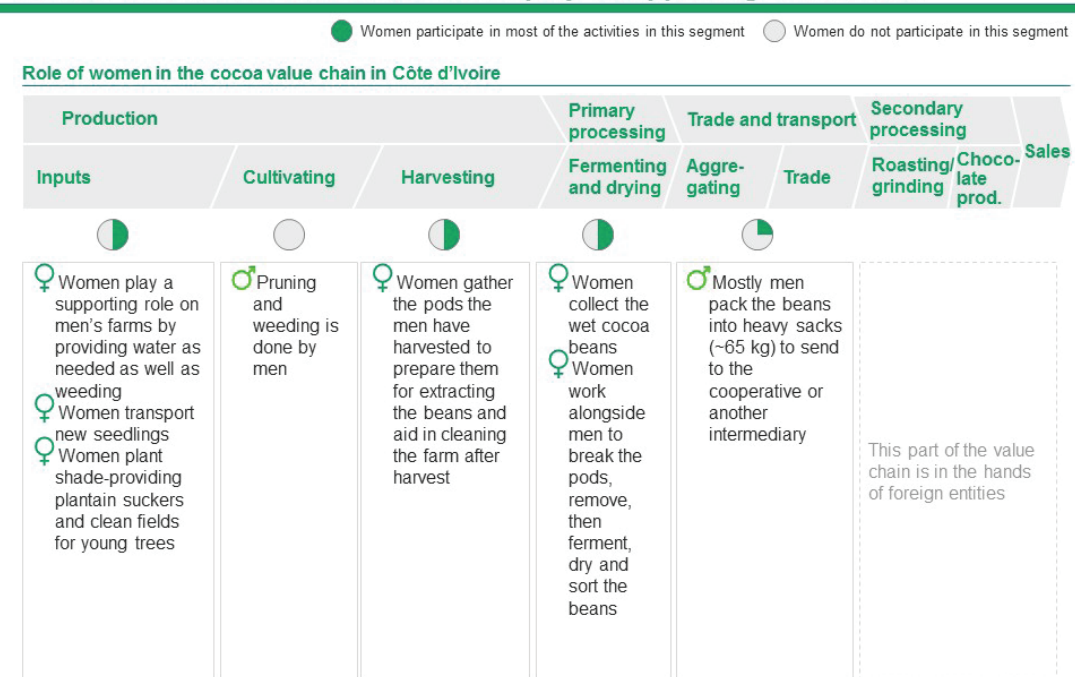
SOURCE: Expert interviews; FAOSTAT; Mars Sustainable Cocoa Initiative; Fair Trade Association; Earth Security Index; African Business Review; AESS

7.7.1 Production

Women who do not own their own farms usually play a supporting role to their husbands or families (Exhibit 21).

EXHIBIT 21

Women who do not own cocoa farms play a supporting role to men



SOURCE: ICCO; USAID; Demographic and Health Surveys; OECD SIGI; Mars; Fair Labour Association; African Business Review; expert interviews

Women work alongside men in the earliest stages of production on their family's or husband's farms. While men typically play the primary role in the preparation of the soil for a new nursery (including spraying pesticides as well as clearing and burning the plot), women plant the shade-providing plantain suckers and clean fields for young trees. They also transport new seedlings while men dig the holes and plant them. From there, men apply crop protection and fertiliser, though women play a supporting role by providing water as needed. The cultivation process is dominated by men. Pruning, for example, is considered taxing and painstaking work and is usually performed by men if it is done at all. Men also take care of ongoing maintenance, e.g., weeding, particularly if it involves machinery, such as mechanical slashers. Women tend to feature more prominently when the workload increases around harvest time. Men typically harvest the cocoa pods from the trees, while women gather the pods to prepare them for extracting the beans and help to clean the farm after harvest.

7.7.2 Primary processing

Everyone, including children, participates in the initial post-harvest processing. Women work alongside men to break the pods, remove, ferment, dry and sort the beans, although the men often split the pods while the women collect the wet beans.

7.7.3 Trade and transport

Once the drying process is complete, men pack the beans into heavy sacks (approximately 65 kilograms) to send to the cooperative or another intermediary. At this point, women's participation drops dramatically. For example, the proportion of women producers as a percentage of suppliers to cooperatives was 3.5 percent in 2013.

7.7.4 Secondary processing and sales

With a few smaller-scale exceptions, downstream processing and sales are primarily in the hands of large, foreign, multinational entities, and women can feature prominently in the agencies regulating these players. In Côte d'Ivoire, for example, the Conseil du Café-Cacao instituted quality control protocols and laboratories in the factories of the major processors. The head of the Conseil is a woman and many of the bean quality auditors working in these labs are also women.

7.8 Constraints for women in cocoa

7.8.1 Production

There is a broad perception that women do not feature prominently (if at all) in the cocoa sub-sector¹¹¹. In reality, 2.1 million women work in the sub-sector in Côte d'Ivoire, making up 68 percent of the Ivoirian cocoa farming workforce (both owners and labourers)¹¹². Similarly, in Ghana, approximately 18 percent of cocoa farms are owned by women, although on average they are 40 percent smaller than those of men¹¹³. Women who do not own a cocoa plantation but work in the sector on family farms are mostly unremunerated, as cash crops such as cocoa are traditionally within the purview of their husbands¹¹⁴. They also do not benefit from the services available to the sub-sector. For example, only 11 percent of women owners or labourers in Ivoirian cocoa production participate in agricultural training programmes¹¹⁵.

7.8.2 Primary processing

Women are usually involved in primary processing on family farms where they receive little or no remuneration.

7.8.3 Aggregation

Women who work on their family cocoa farms are usually not very involved past the primary processing stage of the value chain. Typically, husbands sell cocoa after the primary processing of fermentation is completed. As such, they have little control over the income generated by the farms and depend on their husbands for any kind of compensation deriving from their labour¹¹⁶.

After smallholders conduct primary processing, they sell their cocoa to cooperatives or private

buyers. Cooperatives usually demand that members own land, a requirement that excludes most women from these organisations and their associated benefits¹¹⁷. Even when women are members of cooperatives, they do not get the full benefit. In Côte d'Ivoire, only 40 percent of women in cocoa cooperative zones are involved in activities related to cooperatives such as input supply or aggregation of production, while 17 percent are engaged in casual employment by cooperatives in jobs such as sorting and cleaning beans or filling bags¹¹⁸. Moreover, women are largely excluded from management positions that are often not advertised or are filled on recommendation by the overwhelmingly male leadership¹¹⁹. In Ghana, 38 percent of women involved in cocoa farming are full members of an agricultural association and 16 percent hold leadership positions¹²⁰.

7.8.4 Secondary processing and sales

There are a handful of women-run artisanal chocolate-making operations in Côte d'Ivoire and Ghana. However, the broad exclusion of women in aggregation, trade and transport activities and their under-representation as intermediaries prevents them from moving further downstream.

7.9 Opportunities for women in cocoa

To address the constraints faced in cocoa, we have identified three primary opportunities:

- **Develop and help promote women entrepreneurs in large-scale agribusiness** along the value chain, especially in areas where women are already involved;
- **Help women entrepreneurs create chocolate and cocoa products branded as coming from women-led value chains** targeted at niche markets, and build on current artisanal chocolate production in Côte d'Ivoire; and
- **Expand women-inclusive cooperative programmes** that increase productivity and establish women as co-owners.

Potential partners to develop these opportunities include the Conseil du Café-Cacao, Mars and TechnoServe.

Details on each of these opportunities are provided in the remainder of the section.

7.9.1 Develop and help promote women entrepreneurs in large scale agribusiness along the value chain, especially in areas where women are already involved

One way to increase the number of women business owners is to increase access to financing. This would be most successful in those areas where women are already present in the value chain. The most obvious place to begin is with women involved in growing cocoa: financing could be extended for women with cocoa farms who wish to expand but lack the capital to

do so. Financing women to start cocoa farms is also an option for women who have access to land. Both of these options would require financial and possibly agronomic training and technical assistance.

Another opportunity lies in the work that many women do to prepare new planting material. In Côte d'Ivoire, replacing ageing trees is necessary to increase yields. New high-yield, pest-resistant varieties (e.g., Mercedes) have been developed locally by the National Centre for Agronomic Research, and improved variety clones are under development. These improved varieties can increase yields fourfold and cut the time from planting to pod production by half¹²¹. However, these improved materials are not yet widely available¹²². Private-sector organisation programmes, e.g., Nestlé's Cocoa Plan, are working to distribute Mercedes seedlings free of charge through nurseries that they sponsor, but quantities are limited¹²³.

There is an opportunity to scale up replanting and promote women's economic empowerment through women-run, improved-variety nursery businesses. Since women working in cocoa have expertise in tending to young cocoa plants, other producers will likely be willing to come to their nurseries and pay the market price of USD 25 for 1,300 seedlings—enough to replace 1 hectare. One woman entrepreneur could grow 30,000 seedlings in six months to generate more than USD 1,100 a year¹²⁴.

Another micro-enterprise opportunity would involve training women as local agronomic experts to provide advisory services to other cocoa farmers in their area. In this capacity, women could leverage their knowledge of bean fermentation and drying to act as post-harvest, processing-quality experts who could liaise with exporters and act as information sources for other farmers. Mars' Sustainable Cocoa Initiative has created such a role: Cocoa Village Clinic (CVC) operators are fondly referred to as "cocoa doctors". The CVCs are run by rural entrepreneurs who provide services to farmers to enhance their productivity. As these "cocoa doctors" enjoy a strong standing in the community given their ability to train and improve productivity, actively targeting and encouraging women to take on this role could really empower women in the communities where they operate. To date, women occupy few of these roles, but a big opportunity exists to tap into the talent pool of women as programmes like the CVC expand.

Despite the challenges of increasing downstream activities in the value chain, Côte d'Ivoire aims to increase the proportion of its processed cocoa exports from one-third to one-half¹²⁵, and French chocolate maker CEMOI plans to open a chocolate factory in the country in 2015¹²⁶. Although the majority of this downstream activity is conducted by large multinational corporations, some small domestically owned processors are participating. Given the oligopolistic nature of the downstream value chain, growing a medium-size domestic processor of semi-finished cocoa could be appealing to the chocolate makers as it would give them more supply options¹²⁷. In this context, there may be opportunities for increased participation by women who already play an important role in ensuring bean quality throughout the value chain,

right up to the processing factory itself. Indeed, there are already a few examples in the region of relatively small chocolate operations with high, if not exclusive, women's participation (e.g., Bio-Partenaire and Douceurs de Suzanne/La Maison du Chocolat Ivoirien in Côte d'Ivoire and Divine Chocolate in Ghana)^{128,129}.

Financing for agribusiness entrepreneurs must have appropriate repayment timelines to accommodate the additional time required to generate income from perennial crops. Alternatively, the promotion of women's village savings-and-loan entities, such as the Chocolate Gender Action Plan Mars is pursuing, may also accommodate the cocoa revenue cycle and encourage women's management of resources and economic decision-making¹³⁰.

7.9.2 Help women entrepreneurs create chocolate and cocoa products branded as coming from women-led value chains to target niche markets

The handful of women-run artisanal chocolate-making operations in Côte d'Ivoire presents an opportunity to expand by creating chocolate and cocoa products branded as coming from women-led value chains.

Such products would be produced from cocoa that is grown by both men and women. Given the constraints women face in production and processing, it would not be practical or indeed possible to source raw cocoa that is grown or processed exclusively by women. Instead, women may enter into contracts with men processors (today, roughly 30 percent of cocoa produced in Côte d'Ivoire is roasted and ground in the country) that would allow them to purchase high-quality beans that have already been dried and roasted.

To do this, women would need training in chocolate production, funding in chocolate processing and, most importantly, links to global markets that would be willing to pay a premium for their chocolate. The processing would need to be done to a suitable quality and phytosanitary level to gain access to the international market. Further study would need to be carried out to identify the specific demands of the market.

7.9.3 Expand women-inclusive cooperative programmes that increase productivity and establish women as co-owners

Women represent 2.1 million of the 3.6 million people involved in cocoa production in Côte d'Ivoire, and yet most of them are not compensated for their labour. To address this issue, women must be allowed to take a greater role in cooperatives and family farm management to increase their visibility and voice.

One of the first places where this can be addressed is in cooperatives where women are largely deprived of the benefits associated with membership. Increasing women's access and activities

by extending membership to family members of farm owners would increase women's access to technical and financial services. Enforcing existing cooperative hiring and management election policies that are already officially available to women could open employment and management opportunities to women. Quotas for women leaders or members would also ensure that they are increasingly visible.

Within cooperatives (that are currently largely dominated by men), practices can be adopted to increase the role of women and involve them more in planning and financial decisions. For example, inviting women to meetings would give them a better understanding of the sector. Gearing training towards couples would allow them to decide collaboratively how tasks should be divided among family members (e.g., an ongoing coffee programme in Ethiopia requires both husbands and wives to be present when obtaining payment for harvest). Payment should be transferred to joint or women's bank accounts to ensure that women have better access to it.

These opportunities will help women grow economically and bring benefits to the rest of their families.



Case study: Kuapa Kokoo cooperative in Ghana

Soon after the Ghanaian cocoa market was liberalised in the early 1990s, a group of farmers created the Kuapa Kokoo cooperative. This brought cocoa farmers into direct contact with fair-trade buyers, allowing them to bypass the state-owned marketing agency for the first time. In addition to selling fair-trade cocoa, Kuapa Kokoo has been a leader among cooperatives by empowering women and delivering as much value as possible to all its members.

Kuapa Kokoo has initiated programmes to encourage women's involvement and success, e.g., it set quotas on the minimum number of women leaders at each level of the cooperative (except the executive board), and it established a loan programme for women that does not require collateral. Instead of putting up cash to receive a loan, women are only required to receive an affirmation of creditworthiness from a group of fellow members who will hold them accountable for the money they receive.

To provide more opportunity for members, Kuapa Kokoo created Divine Chocolate to become the first cooperative with a directly associated chocolate brand.

As a result of these activities and other practices, Kuapa Kokoo has been a strong and reputable cooperative since its inception more than 20 years ago and has expanded its membership to more than 60,000 farmers in 1,350 villages across Ghana. It now supplies nearly 6 percent of Ghanaian cocoa annually¹³¹.

The quotas on women's involvement have boosted their leadership to 45 percent of area-level representatives. There is no quota for the board, but 60 percent of the members are women. In total, 33 percent of the members of the cooperative are women¹³². Eight hundred women in 35 communities have benefited from uncollateralised loans¹³³ and the livelihoods of recipients (in addition to the tens of thousands of people involved in Kuapa Kokoo) have improved.

8 COFFEE

Coffee was selected for this study based on its significance in terms of agricultural production and export across Africa and its fit with the AfDB's OSAN Agriculture Sector Strategy 2010–2014.

8.1 Executive summary

At USD 20 billion, the global coffee market is large, but it has grown slowly, at just 1 percent per year between 2004 and 2013. Most of the growth (6 percent per year) has come from emerging markets where incomes are rising. Brazil, Indonesia and Vietnam supply two-thirds of the world's coffee, while Africa's share has declined from 25 percent to less than 10 percent in the last 30 years. Côte d'Ivoire, Ethiopia and Uganda are the continent's three largest coffee producers and account for 55 percent of production.

Ethiopia's coffee production has grown 60 percent over the last 10 years on the back of strong government support and the creation of the ECX. To continue growing and to overcome low yields (Ethiopia produces 0.5 tonnes per hectare, which is 80 percent lower than Vietnam), its smallhold farmers must adopt simple yield-boosting cultivation methods more widely, e.g., pruning, weeding and replanting.

Coffee provides a livelihood for 4.5–5.0 million people in Ethiopia: roughly 4.1–4.4 million work in small-scale production, growing coffee as a portion of their overall economic and subsistence activities. 300,000–400,000 people work seasonally in processing, 50,000–100,000 work seasonally on commercial farms, and the remaining 20,000–30,000 work in trade or export. Women make up about 75 percent of the coffee workforce but access only 43 percent of the revenue. This is because they own only about a quarter of smallholder coffee farms, occupy less well-paying positions and own far fewer businesses than men.

Women working in the coffee sub-sector in Ethiopia face three major constraints that reduce their income:

- Much of the wet-milling (which fetches a 25 percent higher price than dried coffee) is done through cooperatives. Few women coffee farmers are members of cooperatives, meaning they miss out on opportunities to boost the value of their production;
- The ECX does not allow for traceability to original producers, so coffee grown by women cannot achieve the higher price that specialty markets are willing to pay unless it is marketed as such through a cooperative union and sold directly to an international buyer; and
- Women lack business training, links to other value chain players and financing to start businesses because they do not own assets, nor do they have business experience or training.

Three opportunities exist to empower women and increase their economic gains:

- Expand women-inclusive cooperative programmes that increase women's incomes and productivity and establish women as co-owners;
- Create women-grown brands of specialty coffee to achieve premium prices (similar to the Cafe Feminino brand from Peru); and
- Create large women-owned coffee-processing businesses in high-value activities.

8.2 Global and African trends

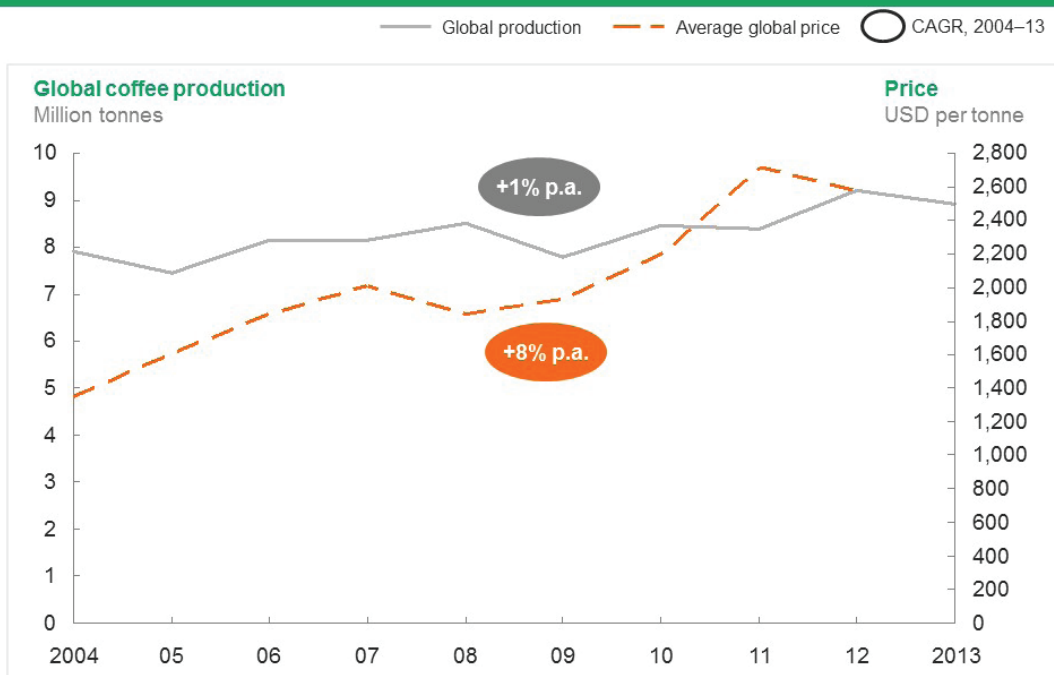
8.2.1 Demand and supply

Coffee is a global commodity grown in tropical regions and enjoyed worldwide. Over the last 10 years, production has remained flat with growth of just 1 percent per year, while prices have risen (Exhibit 22).

Traditionally, coffee-drinking countries in Europe and North America accounted for 80 percent of consumption, but growth in these markets is slow; emerging markets are the real growth engine in coffee demand as incomes in those markets rise. Emerging markets account for just 20 percent of consumption but are growing at a rate of 6.6 percent per year¹³⁴. Brazil dominates the market with a 35–40 percent share of annual coffee production. Vietnam and Indonesia are the second- and third-largest producers of coffee, while Brazil accounts for two-thirds of global production¹³⁵.

EXHIBIT 22

Over the last 10 years, global coffee production has remained approximately flat, while prices have risen by 8% p.a.

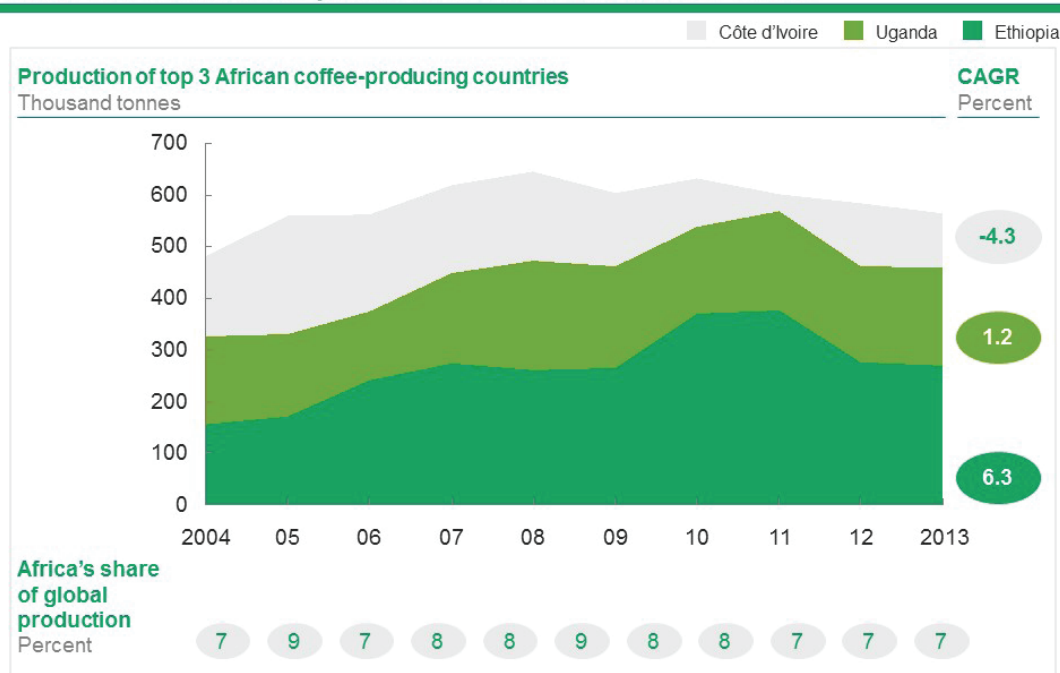


SOURCE: FAOSTAT

Thirty years ago, Africa produced a quarter of the global coffee supply, but this has fallen to 7–9 percent over the last decade¹³⁶ (Exhibit 23). Overall, African production has decreased only by about 10 percent, but South American and South Asian producers have increased their production dramatically. The levels of production differ among African countries.

EXHIBIT 23

Since 2004, Africa has produced 7–9% of the world's coffee



SOURCE: FAOSTAT; expert interviews

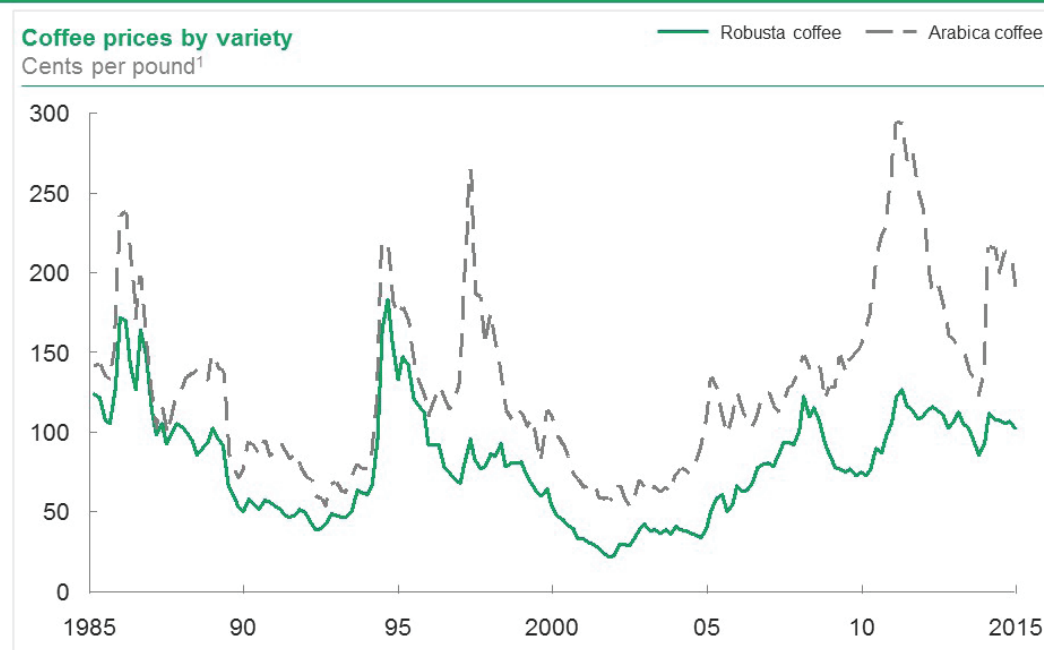
While Africa's share has declined since 1980, Ethiopia, the largest producer, has maintained its share of global production at 2–4 percent. In fact, Ethiopia increased production by more than 6 percent per year from 2004 to 2013, thanks to a supportive regulatory structure that includes the ECX. Uganda, the second-largest producer in Africa, however, only realised growth of 1 percent per year. In Côte d'Ivoire, the third-largest producer in Africa, production has fallen by more than 4 percent per year over the same period.

8.2.2 Price

The price of coffee is highly volatile, often moving by more than 50 percent in a single year and is subject to severe spikes or dips about once a decade¹³⁷ (Exhibit 24). It is influenced by the growing conditions in South America and, to a lesser extent, in South Asia. Since Brazil, Vietnam and Indonesia represent two-thirds of the global supply, abundant or scarce harvests in any of these regions have an effect on the prices of commodity coffee in Africa. Given Africa's relatively small production, changes in supply there have little effect on global prices.

EXHIBIT 24

The price of coffee is highly volatile



¹ International Coffee Organisation New York cash price
SOURCE: Index Mundi; ICO

The Arabica and Robusta varieties are highly distinct. They are traded independently, grow under different conditions and produce different types of products. East Africa mainly grows Arabica, as it has the high elevation necessary for the variety to grow well, while West Africa only produces Robusta.

Arabica fetches a higher price per unit weight and often trades at a 50–100 percent premium over Robusta. Arabica beans command a higher price because they are more expensive to produce per kilogram and there are a limited number of areas in which they can be grown successfully. The quality and reputation of Ethiopian beans mean that they command a higher market price than other Arabica beans, and they sell for anywhere between 10 percent and 100+ percent more than coffee traded on the New York market.

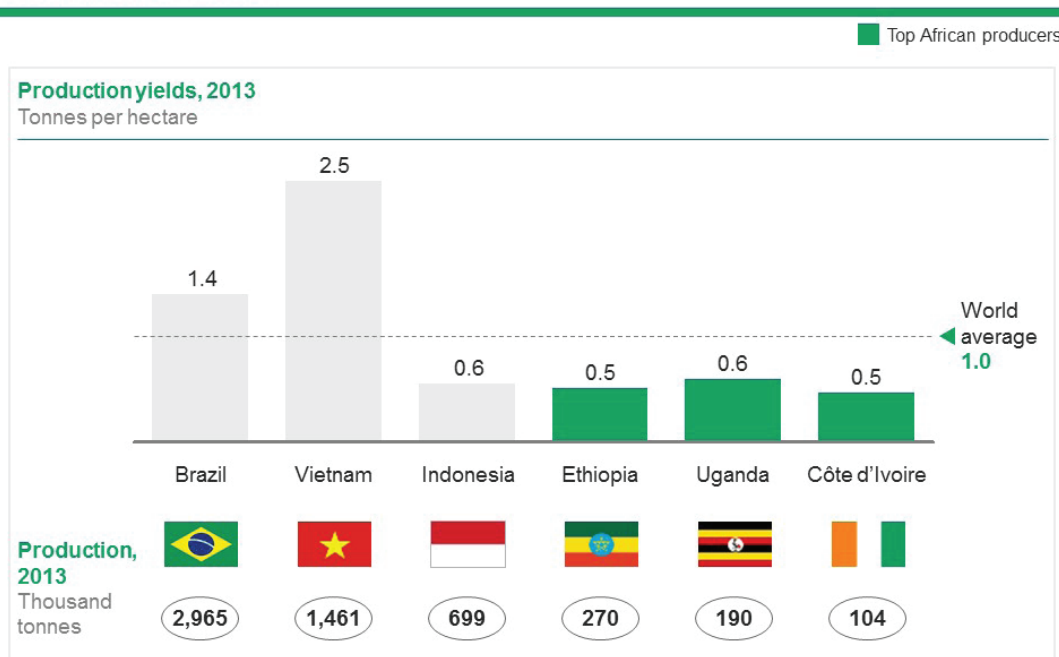
8.2.3 Yields

Africa’s coffee yields are far lower than those of the other major producing countries (Exhibit 25). For example, average yields in Ethiopia are 0.5 tonnes per hectare, compared to 1.4 tonnes per hectare in Brazil and 2.5 tonnes per hectare in Vietnam. The yields of other African producers

are similarly low; Uganda produces an average of 0.6 tonnes per hectare and Ivorian producers average 0.5 tonnes per hectare. Much of this disparity results from differences in farming practices: less than 10 percent of smallholder farmers in Africa use crop protection or fertilisers and most tend not to use basic agronomic techniques, such as pruning and replanting¹³⁸.

EXHIBIT 25

Africa's coffee yields are significantly below world average and best-in-class levels



SOURCE: FAOSTAT; expert interviews

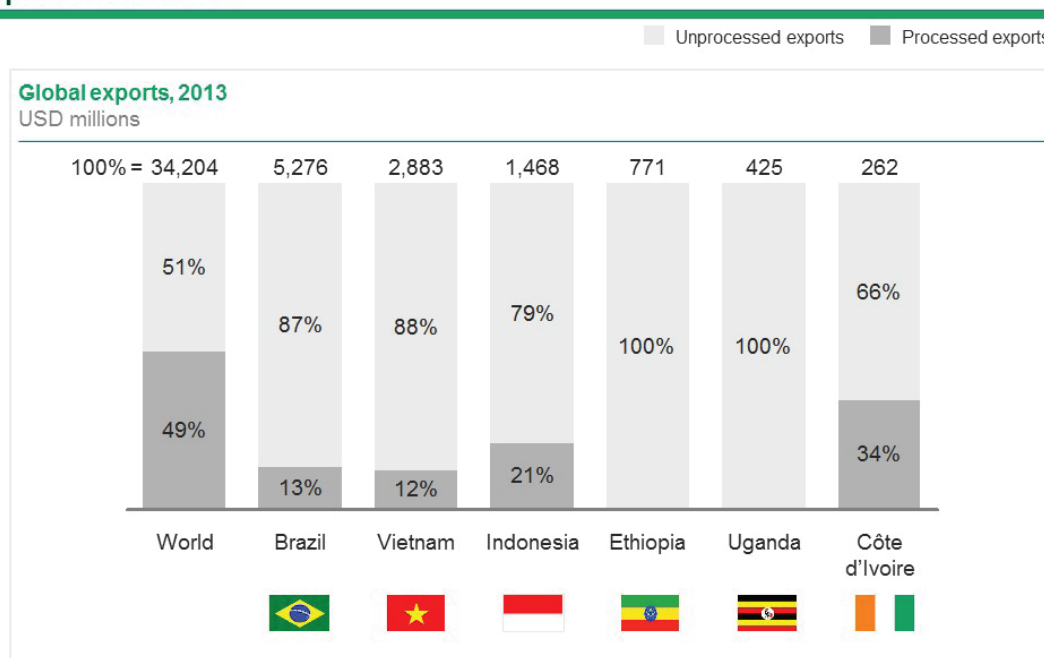
8.2.4 Exports

Coffee is an export crop of significant value for many countries, with global exports from coffee and coffee products topping USD 34 billion in 2013. Of this total, raw exports of unroasted coffee (USD 17.5 billion) slightly outweighed the value of processed exports (USD 16.6 billion). Over 99 percent of exports from Africa come in the form of raw beans¹³⁹ that have been processed through washing or sun-drying but have not yet been roasted, ground or blended with other types of coffee. These green, unprocessed beans are typically packed in 60 kilogram bags and shipped by container around the world. The final coffee product is not prepared until it is close to its destination market because different varieties are often blended to achieve a balance of taste and price.

Ethiopia is Africa’s largest coffee grower and exporter. In 2013, it posted USD 771 million in exports, which were almost exclusively raw coffee beans¹⁴⁰. This represents almost 30 percent of the country’s annual export earnings, making coffee its number one export. Uganda exported USD 424 million of coffee in 2013, with all but USD 1 million of that coming from unprocessed coffee. Côte d’Ivoire is the exception (Exhibit 26), as about a third of its coffee exports (USD 262 million in 2013) come from packaged coffee products thanks primarily to a Nestlé coffee factory in Abidjan that produces soluble coffees for the West and Central African markets.

EXHIBIT 26

Côte d’Ivoire is the only African producer to export a significant amount of processed coffee



SOURCE: FAOSTAT

8.3 Regional and global trade flows—ECOWAS and COMESA

8.3.1 ECOWAS regional and global trade flows

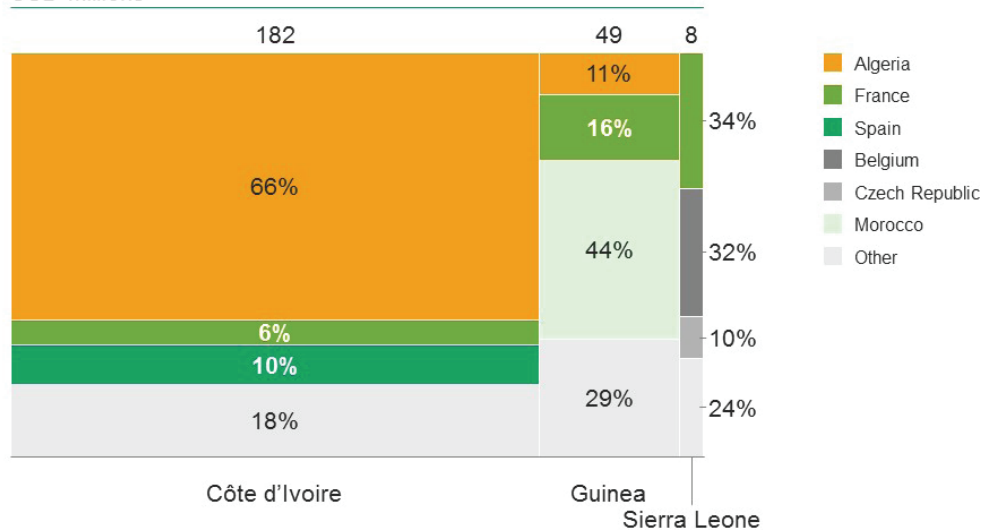
ECOWAS coffee producers are well integrated into regional and global value chains: Algeria and France are the largest export destinations for ECOWAS coffee beans (Exhibit 27). Similarly, Morocco buys more than 40 percent of Guinea’s coffee exports.

EXHIBIT 27

Algeria, Morocco and France are the largest export destinations for ECOWAS coffee

Export destinations for coffee beans from ECOWAS coffee-producing countries, 2012

USD millions



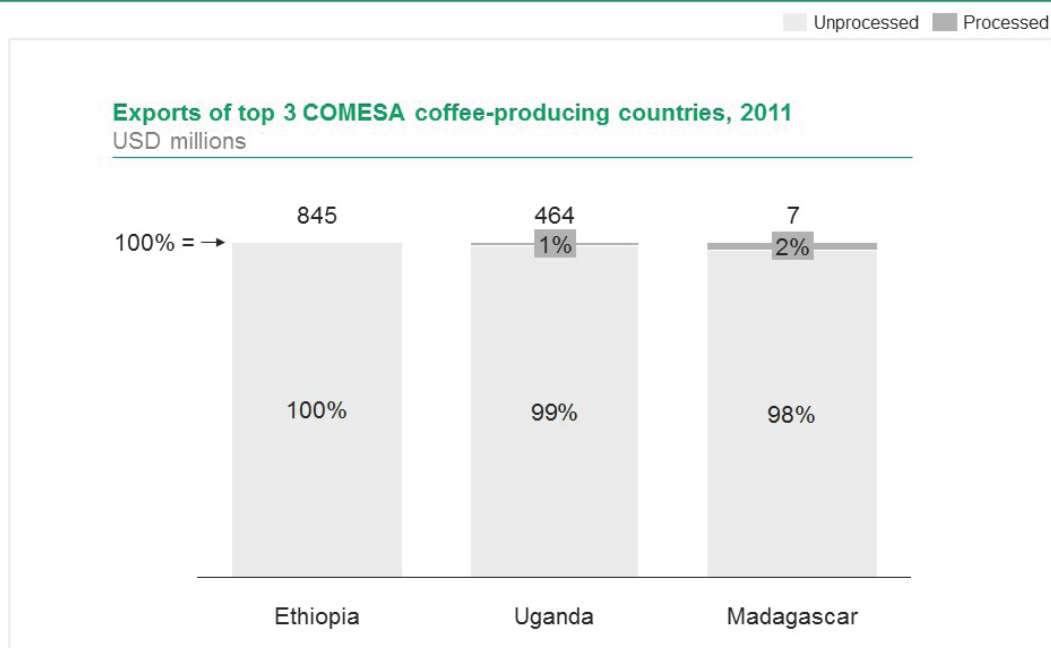
SOURCE: FAOSTAT; UN COMTRADE; MIT

8.3.2 COMESA regional and global trade flows

Coffee exports from Ethiopia, Uganda and Madagascar reached USD 1.3 billion in 2012 with 64 percent of that or USD 845 million coming from Ethiopia, 35 percent or USD 464 million from Uganda, and less than 1 percent or USD 7 million from Madagascar. However, COMESA's coffee producers have limited processed exports with more than 99 percent of exports in the form of unprocessed, roasted coffee beans (Exhibit 28).

EXHIBIT 28

COMESA's coffee producers have limited processed exports



SOURCE: FAOSTAT

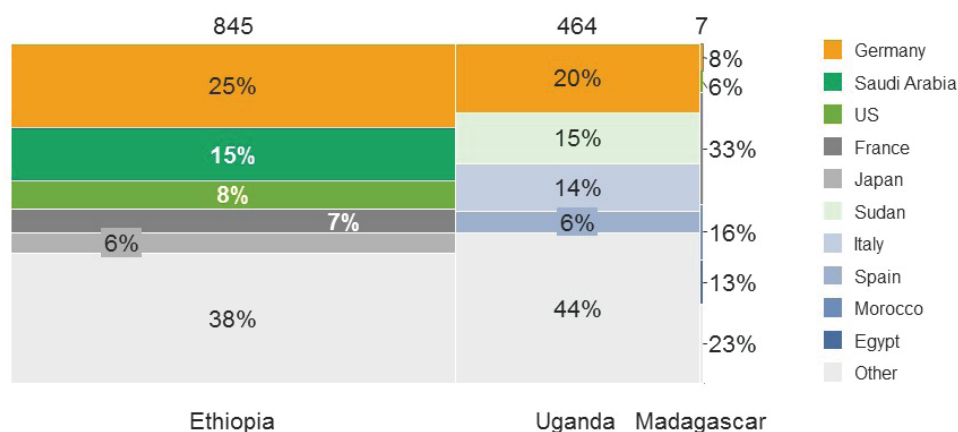
Germany, Saudi Arabia and Sudan are the top export destinations for COMESA coffee overall (Exhibit 29), with 25 percent of Ethiopia's and 20 percent of Uganda's exports going to Germany, 15 percent of Ethiopia's exports going to Saudi Arabia and 15 percent of Uganda's exports going to Sudan.

EXHIBIT 29

Germany, Saudi Arabia and Sudan are the largest export destinations for COMESA coffee

Export destinations for top 3 COMESA coffee-producing countries, 2012

USD millions



SOURCE: FAOSTAT; UN COMTRADE; MIT

8.4 Government support for the sub-sector

The governments of Ethiopia, Uganda and Côte d'Ivoire are involved in the coffee sector in different ways. Ethiopia's government is highly involved. With coffee being its largest foreign-exchange earner, exporting large amounts of coffee is a high priority. Over the last decade, the government used regulation to break up the cartels of traders and exporters who once dominated the market. It has done this by establishing a network of warehouses that reduces the number of intermediaries involved in bringing goods to market by requiring all players to register with the government and, most importantly, by establishing the ECX to bring transparency and easy access to the market for buyers and sellers.

The government of Côte d'Ivoire has chosen to regulate the coffee market in a different way. Instead of creating an exchange on which the vast majority of coffee must be bought and sold, it sets a fixed minimum price every year that buyers must pay. In Uganda, the government supports farmers with agricultural extension agents while buying and selling is conducted through private channels.

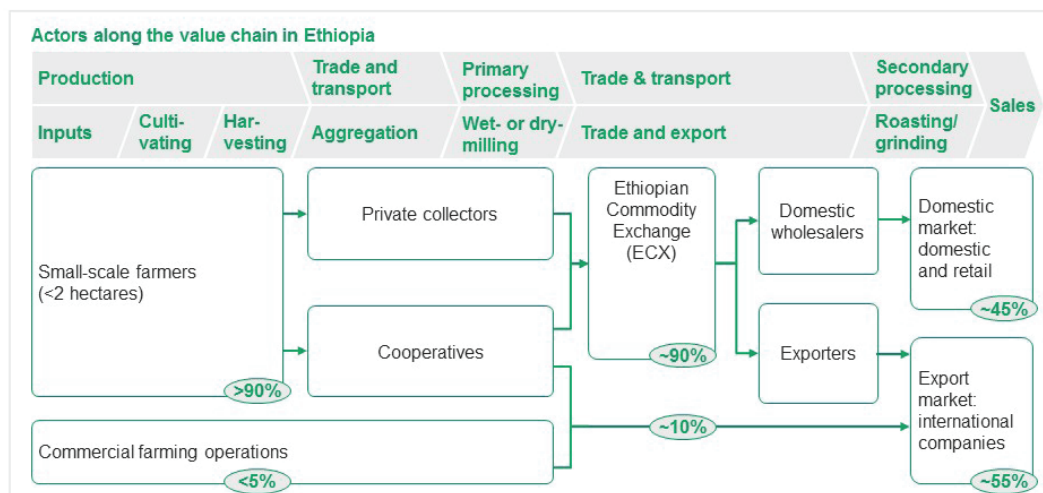
8.5 Value chain players

8.5.1 Ethiopia value chain

The ECX is the biggest distinguishing element of Ethiopia’s coffee value chain, as 90 percent of the traded volume of coffee passes through it (Exhibit 30). Only cooperative unions and large commercial farms can bypass the ECX, which is often done to achieve higher prices in the specialty market. People and organisations involved in the post-production value chain are required to register with the government, meaning that players are held accountable for the business they do. Since foreign exchange is so important to the country, only coffee that does not meet export standards can be sold on the domestic market¹⁴¹.

EXHIBIT 30

Coffee value chain players in Ethiopia



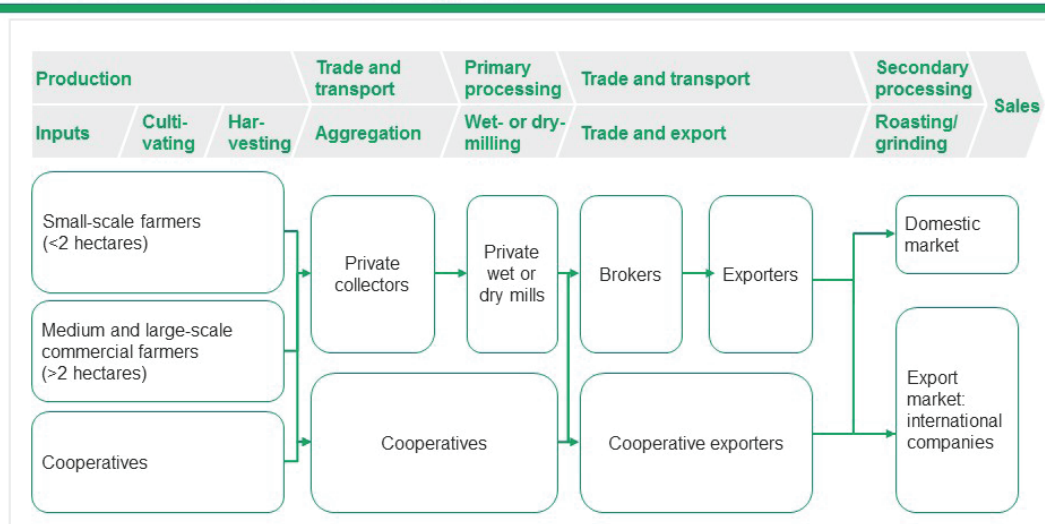
SOURCE: ECX; expert interviews

8.5.2 Uganda value chain

Uganda's value chain is not as heavily regulated as Ethiopia's; the country does not have a commodity exchange through which the coffee is required to pass. As in Ethiopia, there are many smallholder farmers (Exhibit 31).

EXHIBIT 31

Coffee value chain players in Uganda



SOURCE: UNDP

8.6 Constraints in the coffee sub-sector

8.6.1 Production

About 95 percent of Ethiopia's coffee is produced by smallholder farmers operating on less than 2 hectares of land¹⁴². This makes it difficult for farmers to learn about the best techniques or the right tools, inputs and markets.

Access to inputs is a recurring constraint across most crops in developing countries, and Ethiopian coffee is no exception. Many farmers lack the basic tools to prune and plant coffee, which alone could double yield. Over 90 percent of smallholders in Ethiopia do not use chemical fertilisers or crop protection, but most major agricultural development organisations believe that this is not

necessary when large gains can be achieved by tending crops or using naturally occurring pest management and fertilising solutions¹⁴³. For example, the TechnoServe coffee programmes have recorded an average 42 percent boost in yield among their programme participants, without the use of chemicals or synthetic fertilisers¹⁴⁴.

In cultivation, the largest constraint facing Ethiopian producers is that most farmers do not tend their coffee plants throughout the year. Many are unaware that in some cases this could double their yields and many do not have training in how to do so.

Harvesting is similarly constrained. Some farmers pick the cherries too early or do not know how to store them before processing to prevent damage. The almost universal practice of hand-picking in Ethiopia also lowers productivity. However, mechanical harvesting is not an option for the vast majority of farmers, even if they have financing¹⁴⁵. Although mechanical harvesting is over 20 times faster than hand-picking, machines are only useful on plantations where coffee is planted in rows and on farms many times larger than the typical smallholder plot. This is often not the case in Ethiopia.

8.6.2 Primary processing

Coffee can be processed either by sun-drying or wet-processing; wet-processing allows farmers to achieve USD 1.10 per kilogram more for their crops. Sun-drying—used on two-thirds of the coffee produced in Ethiopia—is less capital intensive but commands a lower price, as the beans lose the weight of the moisture inside them while drying. Most smallholder farmers cannot afford to set up wet mills, and many cooperatives do not understand the bottom-line impact of wet-milling or have not been able to access financing.

8.6.3 Trade and transport

Transporting coffee in rural areas can be expensive. When smallholder farmers are not able to sell through functional cooperatives or low-cost collectors, they are sometimes forced to pay a hefty price to work through one or more layers of private collectors. Local coffee collectors (*sebsabies*) purchase coffee from individual farmers but cannot pay high prices, as they do not have warehouses and must sell to another entity before the coffee reaches the ECX¹⁴⁶. The next aggregator in the value chain is the wholesaler (*akrabie*) who collects cherries from smaller collectors and processes them independently before taking the coffee to auction on the ECX¹⁴⁷.

The ECX has been a mixed blessing for Ethiopia's coffee industry. On the positive side, it has allowed more players to enter the market in trading and exporting by limiting price-fixing at a national level. However, since the ECX was established in 2008, it has become more difficult for producers to access the specialty export market and sell their products for a higher price than available on the exchange. Also, some international companies are not interested in purchasing coffee from the ECX because the coffee is not traceable to a particular producer or even cooperative.

8.6.4 Secondary processing

As very little secondary processing (roasting, grinding, blending and packaging) is conducted in Africa, most of its value addition is captured elsewhere. Ethiopia exports 55 percent of its coffee, virtually all in the form of unroasted beans. Over 90 percent of the portion that remains in the country is sold unroasted for local consumption. Less than 10 percent of coffee sold domestically is roasted, ground and/or served in a retail setting¹⁴⁸.

8.6.5 Sales

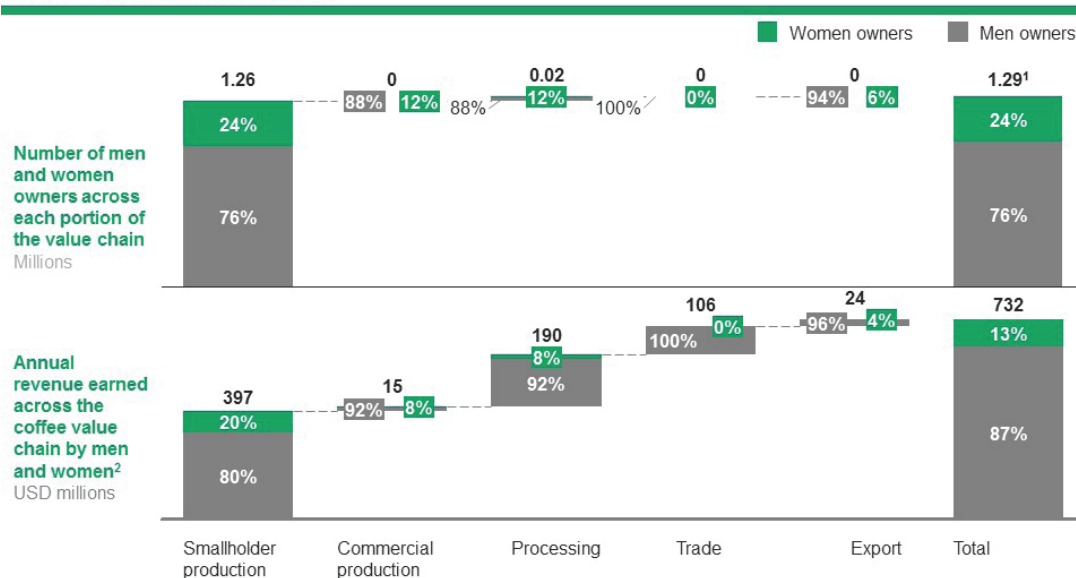
No legal market exists in Ethiopia for high-quality beans for local use. Since the government wants to attract as much foreign exchange as possible, all beans that are deemed “export grade” are exported. This is a constraint for sellers and coffee shops, which are not able to purchase high-quality beans unless they go through illegal channels.

8.7 The role of women in coffee

In Ethiopia, women are involved throughout the coffee value chain. The majority, 2.5 million, are involved in smallholder production: about 300,000 own their own farms while the remaining 2.2 million serve as labourers, primarily on family farms where they do not control the income generated. Women own 24 percent of coffee-related businesses in Ethiopia but receive only about 13 percent of the income (Exhibit 32). As business owners, women mainly participate in smallholder production.

EXHIBIT 32

Women own/lead ~24% of the farms/businesses in the coffee value chain and earn ~13% of the income



¹ Does not sum exactly due to rounding

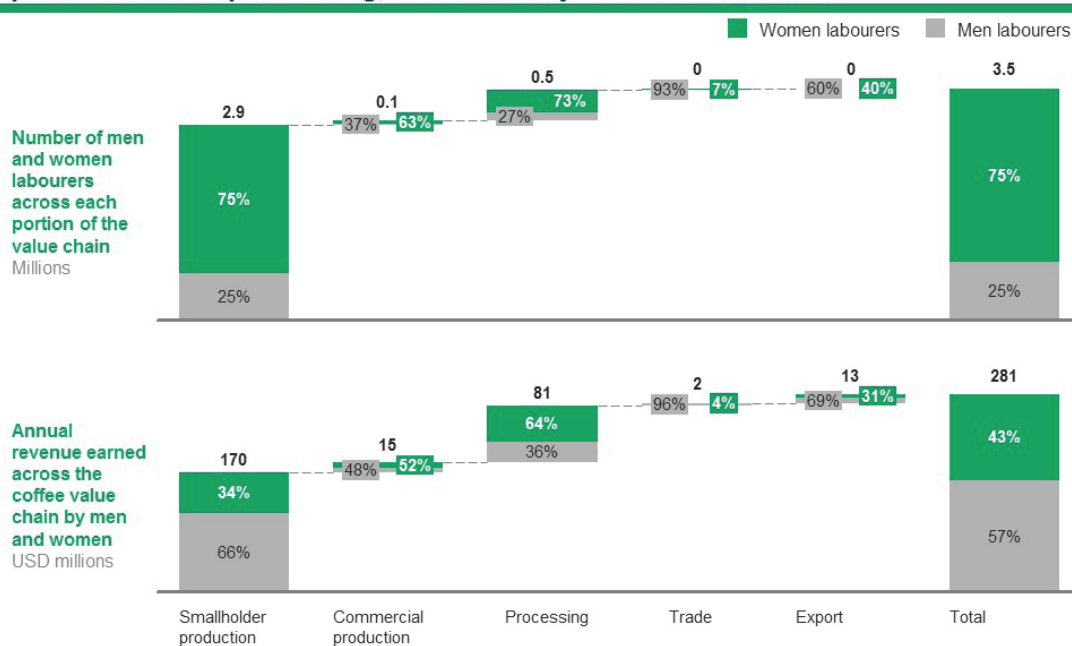
² Earnings represent payment to labourers and revenue, excluding initial cost of coffee and labour to owners

SOURCE: Field visits; expert interviews; FAOSTAT; USAID Coffee Value Chain Analysis

Women constitute about 75 percent of the workers involved in the coffee value chain but earn only about 43 percent of the income (Exhibit 33). In production, women account for 75 percent of labour. In processing, women make up more than 90 percent of the workforce involved in washing the beans at wet mills. They are least active in trade and transport where they participate infrequently. About 40 percent of labourers in the export portion of the value chain are women who are mostly involved in sorting the coffee as it is bagged.

EXHIBIT 33

Women represent 75% of labourers in the coffee value chain, primarily in production and processing, but earn only 43% of the revenue



¹ Labourers across all portions of the value chain except in export are seasonal jobs that serve as a portion of the total annual incomes of labourers, and of which there is some overlap between the same people performing more than one of these jobs

SOURCE: Field visits; expert interviews; FAOSTAT; USAID Coffee Value Chain Analysis

8.7.1 Production

Women are very involved in the coffee value chain, accounting for 60 percent of labour in Uganda and 75 percent in Ethiopia¹⁴⁹ where they are most active in similar types of work across the production cycle^{150, 151}. Women share the task of preparing land with men when it is done by hand, but conducting soil preparation with animals or machines is predominantly done by men (Exhibit 34). Men typically take the lead role in planting, chemical and fertiliser application and pruning, while women are more active in weeding. Harvesting, where men and women work side-by-side, is the most labour-intensive task.

8.7.2 Primary processing

Across Ethiopia, Uganda and Côte d'Ivoire, when coffee is taken from the farm to processing locations to be washed or dried, women are very active in labour roles but not in management and ownership. A study of coffee processing in Uganda¹⁵² shows that women outnumber men 4:1 as casual labourers, but that men outnumber women 5:2 in formal positions and ownership.

8.7.3 Trade, transport and export

Trade is the segment of the value chain in which women are least involved. In Ethiopia, Uganda and Côte d'Ivoire, the physical transport and trade of goods is done predominantly by men, although women undertake tasks in warehouses, including packaging and sorting. In Uganda, men outnumber women 5:3 in trading activities. 75 percent of the roles that women hold are in casual employment¹⁵³.

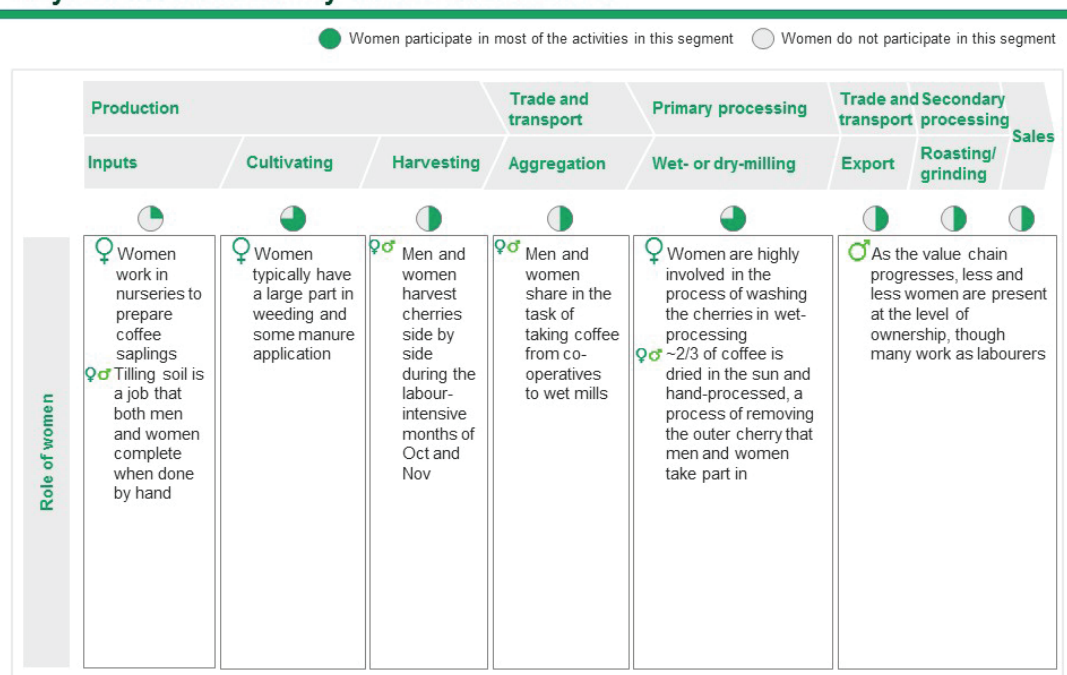
In Ethiopia, women represent about 40 percent of the export labourers who sort and pack coffee, while men are mainly managers and desk workers. Only six of the 110 export businesses in Ethiopia's coffee exporters association are run by women¹⁵⁴.

8.7.4 Secondary processing

Although a few women own coffee-roasting businesses, most women are casual labourers.

EXHIBIT 34

Women work across the coffee value chain; during secondary processing, they are involved mainly as casual labourers



SOURCE: USAID; International Trade Forum; USDA; International Coffee Organisation; IPMS; expert Interviews

8.8 Constraints for women in coffee

8.8.1 Across the value chain

In Ethiopia, just 10–20 percent of cooperative members are women and only 3 percent of women hold leadership positions compared to 15 percent of men¹⁵⁵. It is the same in Uganda, where only 5 percent of women hold leadership positions in their cooperatives¹⁵⁶.

Access to financing is another challenge for women, as loans are contingent on past business experience and assets that disproportionately large numbers of women do not possess. The prevalence of female borrowers decreases in proportion to the sum borrowed. Many women, unable to obtain large loans, are confined to micro-credit where they constitute 64 percent of borrowers¹⁵⁷. Even so, many more women seek credit than can be served.

Women have the right to own land in Ethiopia: reforms made in 1997 give women in monogamous and polygamous marriages joint ownership of land with their husbands and grant single or widowed female heads of households the right to own land¹⁵⁸. However, land practices vary widely. For example, in some regions in the north, as much as 40 percent of land is registered to women compared to less than 1 percent in some areas of the south¹⁵⁹. Overall, about 12 percent of land is held by women in Ethiopia¹⁶⁰.

Even when female household heads have access to land, they sometimes lack the resources such as labour, oxen or credit, making it difficult to obtain inputs to make the land productive. As a result, they are frequently forced to sharecrop their land from a weak bargaining position that results in unfavourable arrangements¹⁶¹.

Poor road infrastructure in some coffee-growing regions, e.g., Yirgacheffe, makes transportation of coffee from farms to markets difficult and expensive. This is especially true for women who are even less likely than men to own or have access to means of transportation in rural areas. Coffee transporters charge high prices in remote areas, which eat into farmers' earnings¹⁶².

8.8.2 Production

In the farm-gate sale of coffee, women sell coffee in small quantities for low prices to coffee collectors throughout the season to earn money to support their families, while men often sell once a year for a higher price¹⁶³.

8.8.3 Primary processing

Much of the wet-milling (which fetches a 25 percent higher price than dried coffee) is done through cooperatives. Because few women coffee farmers are members of cooperatives, they miss out on opportunities to boost the value of their production¹⁶⁴.

8.8.4 Trade and transport

The ECX does not allow for traceability to original producers, so coffee grown by women cannot achieve the higher price that specialty markets are willing to pay unless it is marketed as such through a cooperative union and sold directly to an international buyer. No major brand of coffee is marketed as produced by women farmers in Ethiopia, although this is a niche that women farmers there could fill.

8.8.5 Secondary processing

The role of women in secondary processing is very small in Ethiopia and Uganda. Women lack business training, links to other value chain players and financing to start businesses because they do not own assets, nor do they have business experience or training.

8.9 Opportunities for women in coffee

In Ethiopia, the lack of control over income, low involvement in cooperatives, the difficulty in establishing businesses across the value chain and the low productivity of farms suggest three opportunities for women in coffee:

- **Expand women-inclusive cooperative programmes** that increase their incomes and establish women as co-owners
- **Create women-grown brands of specialty coffee to achieve premium prices** (similar to the Cafe Feminino brand from Peru) by leveraging the women's groups within existing cooperatives to facilitate technical assistance, training and group marketing
- **Create large women-owned coffee-processing businesses in high-value activities** in regional and global value chains, including processing, roasting and export.

TechnoServe, the Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance organisation (ACDI/VOCA) and the Hans R. Neumann Foundation would be potential partners in coffee in Ethiopia.

Details on each of these opportunities are provided in the remainder of the section.

8.9.1 Expand women-inclusive cooperative programmes that increase their incomes and establish women as co-owners

Within cooperatives (which contain over 2 million members and are largely dominated by men), practices can be adopted to increase the role of women and involve them more in planning and financial decisions. For example, requiring both husbands and wives to be present when obtaining payment for harvest would give women more transparency about the amount of money generated

and would bring them one step closer to having access to the money. Also, training programmes should help couples decide together how tasks should be divided among family members. Good examples of successful programmes are the Hans R. Neumann Foundation's coffee programme in Uganda and TechnoServe's coffee programme in Ethiopia.

Increasing the level of involvement of women in cooperatives is another opportunity. In Ethiopia, women account for just 10–20 percent of members, although they are the majority of the workforce. Only 3 percent of women hold leadership positions compared to 15 percent of men¹⁶⁵. Increased participation could be achieved through quotas or by providing incentives for women to join. ACDI/VOCA, an economic development non-profit organisation focused on food security, held a programme in Ethiopia that encouraged the enrolment of women coffee farmers in cooperatives by offering t-shirts, tools for recruiters and prizes, such as motorbikes, to the cooperatives that increased their enrolment of women the most¹⁶⁶. The nine-month campaign enrolled 78,000 women (roughly 25 percent of women coffee farmers in Ethiopia), increasing the participation of women in the cooperatives involved to 30 percent¹⁶⁷. However, this is still a small proportion of the more than 2 million coffee cooperative members in Ethiopia¹⁶⁸.

Another way to increase women's control over the income they generate is by creating groups of women coffee producers. In other countries, this has been achieved through cooperatives that restrict membership to women. In Ethiopia, the government allows only one cooperative in each area, so the most viable solution would be to create women's groups within larger cooperative structures. Women leaders of a women's group are also more likely to spend their money in ways that are valued by their members.

These groups could also create training targeted at women. ACDI/VOCA training programmes for women in Ethiopia allow participants to suggest topics¹⁶⁹. Training will also need to be held at appropriate times of the day, e.g., in the afternoon when women are not doing chores instead of in the morning, when many cooperative meetings tend to be held.

8.9.2 Create women-grown brands of specialty coffee to achieve premium prices

Women-only groups within cooperatives could market women's coffee separately. Although 90 percent of coffee in Ethiopia is sold through the ECX at commodity prices, cooperatives can sell their coffee directly to international buyers. This gives women the opportunity to make direct links with the specialty market and receive premiums for their coffee of up to 100 percent above the ECX price.

To obtain these prices, however, a link with an international buyer must be made. The expansion of the specialty coffee market in recent years has increased the number of such buyers, but access to them is still beyond the grasp of many local cooperatives. For women's groups to have access to this market, it will be necessary to establish an intermediary or a forum for buyers and sellers. If successful, this could enable women to generate income from coffee production and draw more women into the sector.

8.9.3 Create large women-owned coffee-processing businesses in high-value activities

Turning women into successful entrepreneurs will require business training, market links and financing. Many opportunities exist for women to create businesses in high-value areas of the value chain (e.g., processing, roasting and export). Each of these areas requires a unique skill set and business model. In processing, for example, women can create businesses by investing in the installation of wet mills to produce higher-value, washed coffee. With an output of 20 tonnes per year, a wet mill could create more than USD 20,000 in value each year and pay for itself within its first two years. Although the amount of coffee processed through wet mills is growing, only one-third of the crop is currently processed this way each year, leaving a considerable opportunity for entrepreneurs to invest in mills.

Training for new entrants in these areas needs to cover business fundamentals and be tailored to the specific business. Funders such as ACDI/VOCA have created a network of experienced businesswomen mentors to guide less experienced entrepreneurs through the process of starting and running a business¹⁷⁰. Market links with buyers and suppliers are also crucial for new businesses. Similar networks of mentors can be leveraged to deliver these links.

Financing is another key enabler. Many women lack access to finance because they do not own assets such as a house or land to use as collateral and often do not have the business experience banks require. Providing loan repayment guarantees to commercial banks for women borrowers would give them access to financing. Loans could also be issued on favourable terms, e.g., low interest or coupled with a grant from development partners.

□ □ □

Case study: TechnoServe Ethiopia coffee project

Through a USD 65 million grant over the last eight years, TechnoServe has worked with tens of thousands of coffee farmers to increase overall production and enhance the participation of women on coffee farms across Ethiopia¹⁷¹. It has worked through cooperatives to provide training and financing to smallholder farmers.

TechnoServe offers a two-year part-time training programme in which coffee farmers learn good agricultural practices through classroom and field instruction. The group includes women coffee farmers in all its activities. If they are not already members of the cooperatives, it explicitly invites them to meetings and makes some elements of the training available only to couples, treating the wives as partners in the coffee farm. In addition, 40 percent of the trainers are women¹⁷². Training topics include financial planning for both spouses, and the group requires both spouses to be present when payment is made by the cooperative for their coffee.

TechnoServe has also worked through financing partners to make USD 38 million of financing available to smallholders¹⁷³ who use their loans to buy the tools and seedlings they need to launch or increase the productivity of their farms.

Over the last eight years, TechnoServe has tracked improvements in the lives of the coffee farmers it works with. For example, the average income of programme participants has increased by 22 percent and is continuing to grow¹⁷⁴. Men have not resisted the involvement of women in the project because they see the productivity gains.

TechnoServe, now the largest coffee programme for smallholders in Ethiopia, has trained 70,000 farmers, 33 percent of whom are women¹⁷⁵.

9 COTTON

Cotton was selected for this study based on its significance in terms of agricultural production and export across Africa and its fit with the AfDB's OSAN Agriculture Sector Strategy 2010–2014.

9.1 Executive summary

Between 2003 and 2013, substitution of man-made fibres curtailed the growth of cotton production. Global production fluctuated between 22 and 28 million tonnes, reaching a level of 26.3 million tonnes in 2013. Prices increased considerably when production dropped in 2010. Accounting for 62 percent of global production in 2013, China, India and the US are the top producers, while Africa accounted for just 6 percent of global production and 1 percent of the global export value of cotton. This large imbalance in production volume and export value is due to the high proportion of unprocessed cotton exports.

To address this imbalance, African producers would have to develop secondary processing by investing in production factories, requiring steady electricity supply. They would also need to forge links with international markets. The high costs and unreliable supply of electricity and water would make this difficult.

The major constraints faced by cotton farmers in Burkina Faso, Africa's largest producer of cotton, are low productivity and the lack of secondary processing. Its cotton production base is highly fragmented, with 362,000 smallholder farmers and no commercial farmers. Production yields are one-third those of the global leaders (426 kilogram per hectare vs. 1,484 kilogram per hectare in China) due to poor irrigation infrastructure and limited mechanisation. Textile production is very limited, as water and electricity, two key components of processing, are expensive and unreliable.

In Burkina Faso, 4 million people live off cotton. In production, women make up about 50 percent of the labour force but capture only 2 percent of the value created, as they are not remunerated if they are not GPC members. Women do not benefit from production as men sign the contract farming agreements with the cotton ginneries, giving them control over inputs and revenues.

Women who do have access to land have lower yields because they are required to also work on family farms and complete household chores before farming their fields. In processing, women account for only 7 percent of the permanent staff in the country's three ginneries and 2 percent of their total staff (including seasonal workers).

Cotton offers two opportunities to empower women economically. These do not directly address land tenure or land security but provide options for women to earn income by being allocated fields by their husbands or families that they control but do not necessarily own:

- Work with cotton companies or unions to increase the number of women-only GPCs; and
- Increase the number of women farming organic cotton.

Partnerships with unions or cotton companies could help increase the number of women who farm organic cotton.

9.2 Global and African trends

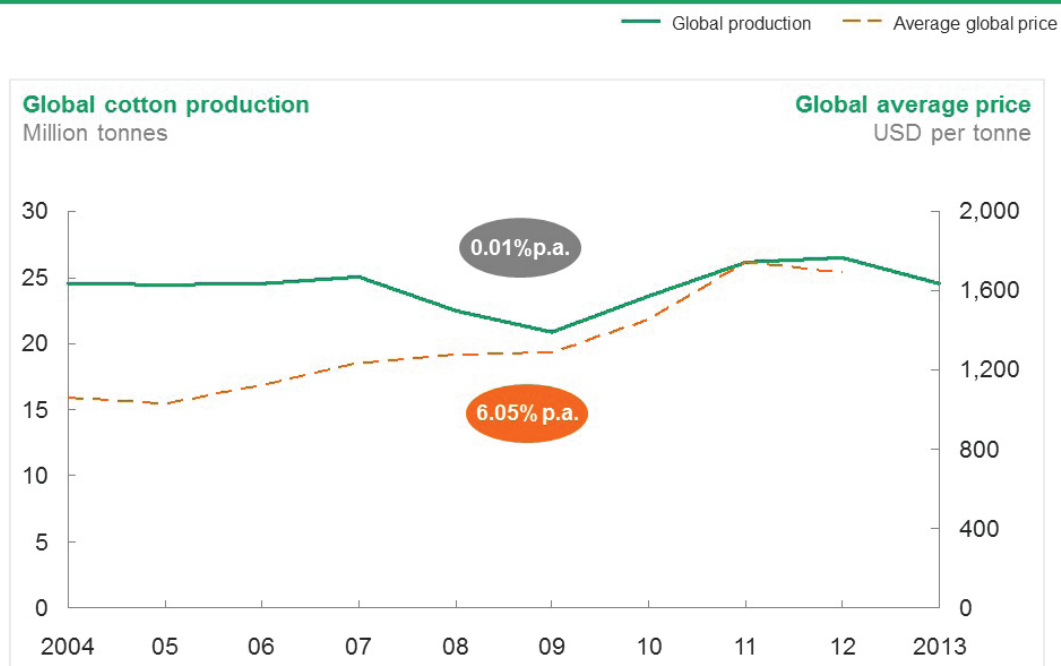
9.2.1 Demand and supply

Over the last decade, cotton production has fluctuated between 22 and 28 million tonnes, with a production of 26 million tonnes in 2013¹⁷⁶. Prices increased slightly between 2003 and 2013 (Exhibit 35), although they fluctuated greatly within given years.

Since 2006, global demand for all textile fibres, including cotton, has grown by 3 percent per year, although cotton-fibre volume has remained flat because of substitution¹⁷⁷. China is the world's largest producer of cotton (26 percent of 2013 global production) followed by India (25 percent), the US (12 percent) and Brazil (5 percent)¹⁷⁸.

EXHIBIT 35

Over the last 10 years, cotton production has fluctuated while prices have increased slightly

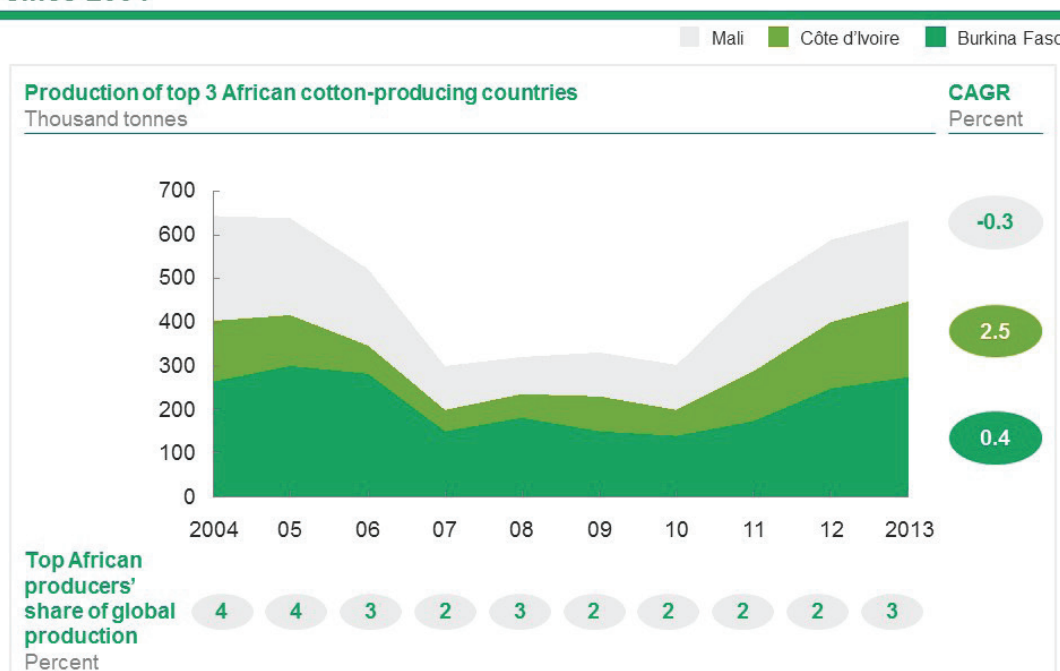


SOURCE: FAOSTAT

In 2013, Africa's top three cotton-producing countries accounted for 3 percent of global cotton production, slightly down from 2004 (Exhibit 36). With a total production of 274,000 tonnes in 2013 (19 percent of Africa's production), Burkina Faso is the top African producer. Mali and Côte d'Ivoire are the next biggest producers, with volumes of 184,000 and 173,000 tonnes, respectively^{179, 180}.

EXHIBIT 36

The contribution of the top 3 African producers has declined slightly since 2004



SOURCE: ICAC; IMF

Cotton is a strategic crop for Burkina Faso, accounting for 24 percent of its agricultural GDP in 2013. Before the gold-mining boom, cotton was Burkina Faso's main export commodity, accounting for about 60 percent of export revenues. By 2012, it represented less than 15 percent of export revenues¹⁸¹ because of the increase in gold exports. There are 362,000 cotton farmers in Burkina Faso¹⁸² and more than 4 million people depend on cotton for their livelihoods¹⁸³.

9.2.2 Prices

Cotton spot prices are extremely volatile due to sudden changes in supply, e.g., China's buying programme¹⁸⁴. Lint spot prices have also been very volatile over the past 14 years, spiking at above USD 200 cents per pound in March 2011, 3.4 times the average for the period. Prices are on a downward trend because the global supply of cotton has increased while demand has fallen due to a growing demand for synthetic textiles¹⁸⁵.

In Burkina Faso, a price-smoothing fund has been set up to protect cotton companies and farmers from price volatility. A floor price paid to farmers for seed cotton is fixed annually: if the floor price paid to farmers is higher than the actual price fetched by cotton companies in the market, the price-smoothing fund covers the difference¹⁸⁶.

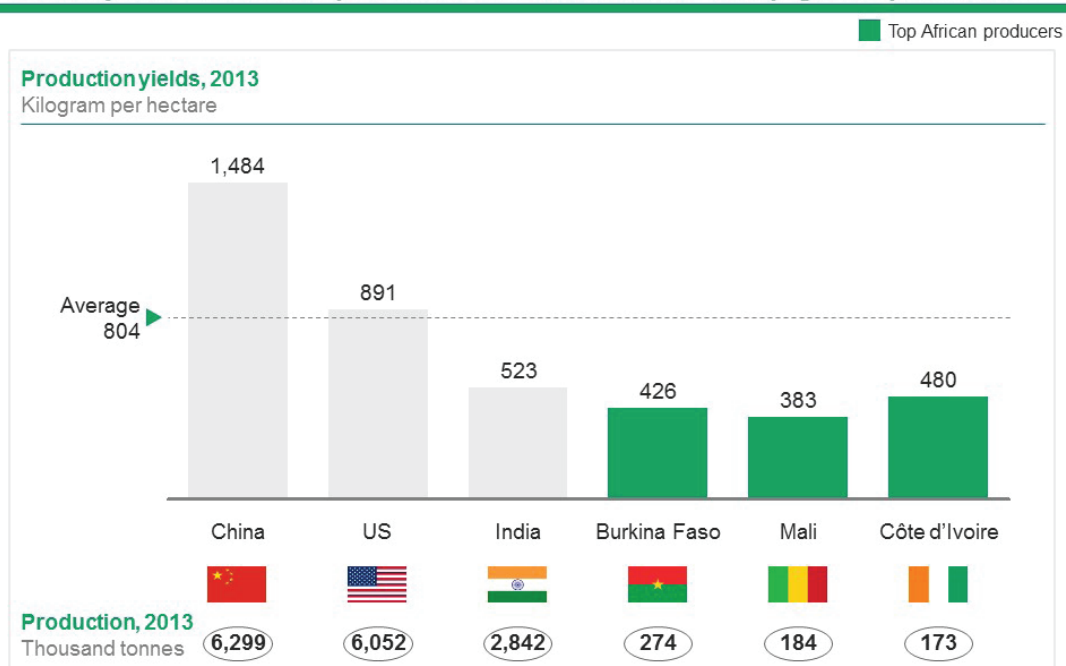
9.2.3 Yields

Yields vary greatly across the top global producers. In 2013, China and Brazil had yields of 1,484 tonnes per hectare and 1,524 tonnes per hectare, respectively, US yields fell by 40 percent to 891 tonnes per hectare while Indian yields fell by 60 percent to 523 tonnes per hectare¹⁸⁷.

Yields of African producers are significantly below those of the top global producers, significantly lagging behind China¹⁸⁸ (Exhibit 37). They are lower because of several constraints: limited use of improved inputs, such as seeds, fertilisers and herbicides (e.g., only Burkina Faso, Sudan and South Africa allow use of genetically modified cotton seeds), limited use of irrigation (90 percent of African fields have no irrigation at all) and limited agronomic knowledge (e.g., in Burkina Faso, some farmers do not plant cotton seeds early enough in the rainy season, resulting in losses).

EXHIBIT 37

Cotton yields of African producers are below those of top global producers

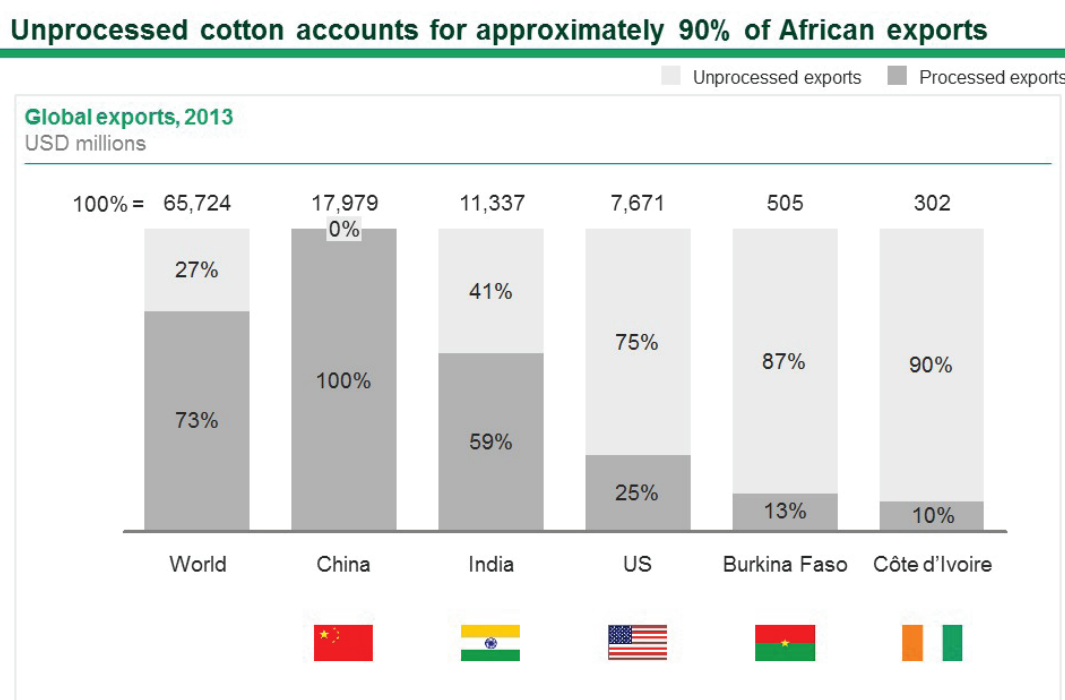


SOURCE: FAOSTAT; ICAC

9.2.4 Exports

In 2013, global exports of cotton reached USD 66 billion. Processed cotton (yarn, seed oil and sewing thread) accounted for 72 percent of the value¹⁸⁹. The top African producers—Burkina Faso and Côte d’Ivoire—contributed approximately 1 percent or USD 807 million of global cotton exports, approximately 90 percent of which was unprocessed¹⁹⁰ (Exhibit 38).

EXHIBIT 38



SOURCE: FAOSTAT; World Bank

9.3 Regional and global trade flows—ECOWAS and COMESA

9.3.1 ECOWAS regional and global trade flows

China and Malaysia are the key export destinations for ECOWAS cotton (Exhibit 39).

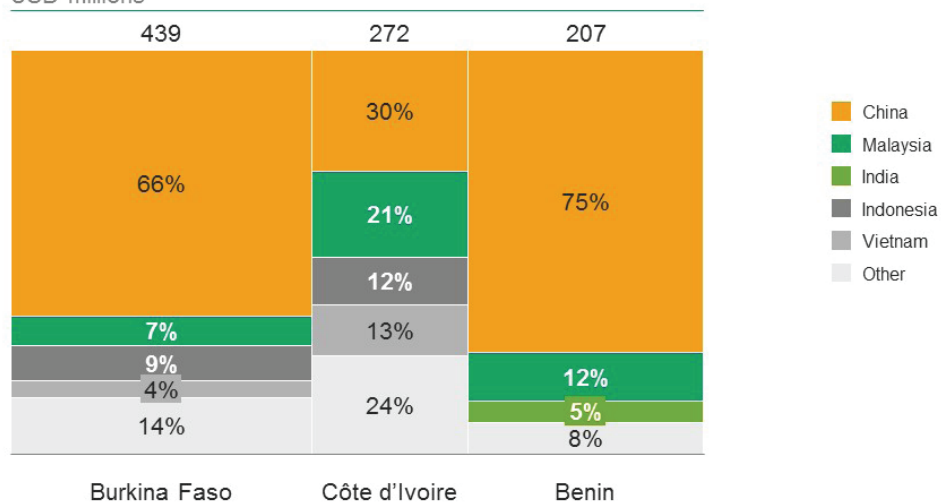
In 2012, Burkina Faso exported its cotton to China (66 percent), Indonesia (9 percent) and Malaysia (7 percent); China (60 percent) and Malaysia (16 percent) were Mali’s largest export destinations; China (30 percent), Malaysia (21 percent) and Vietnam (13 percent) were Côte d’Ivoire’s largest trading partners of cotton.

EXHIBIT 39

China and Malaysia are the largest export destinations for ECOWAS cotton

Export destinations for top 3 ECOWAS cotton-producing countries, 2013¹

USD millions



¹ The 2012 export destinations percentage split was assumed to hold constant in 2013

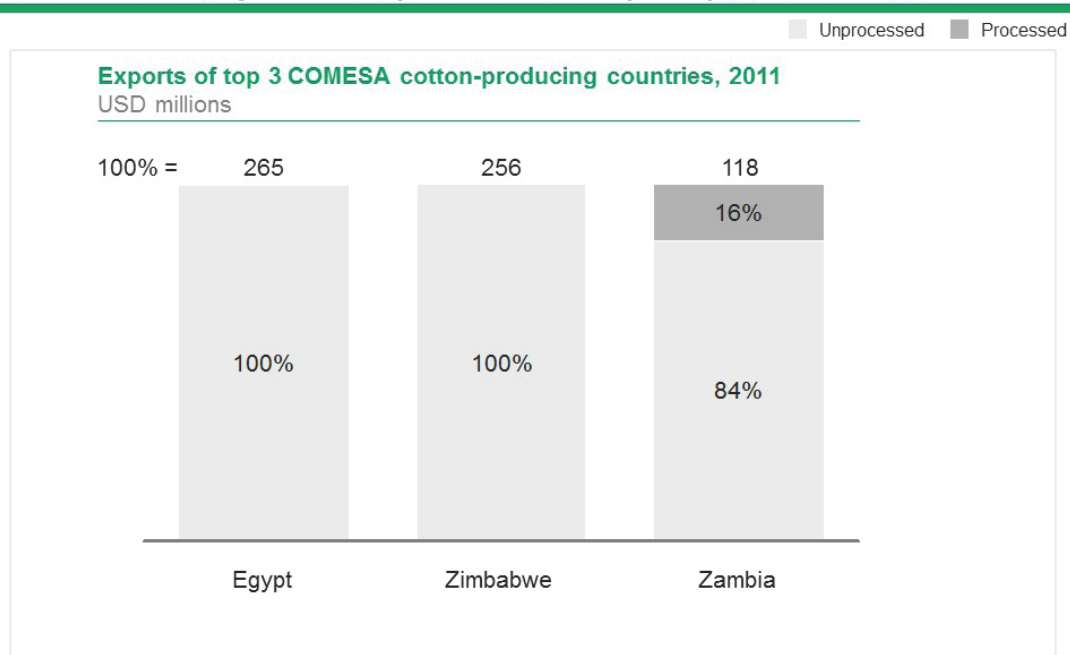
SOURCE: FAOSTAT; UN COMTRADE; MIT

9.3.2 COMESA regional and global trade flows

Of the top three producers, Zambia is the only COMESA producer that exports processed cotton (Exhibit 40) in the form of combed cotton.

EXHIBIT 40

Zambia is the only COMESA producer who exports processed cotton

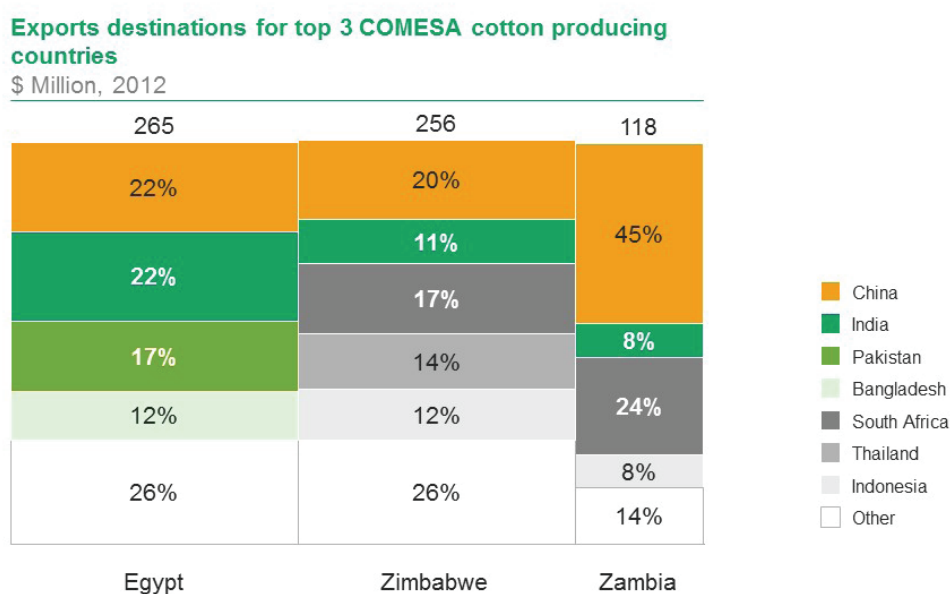


SOURCE: FAOSTAT

India and China are the primary export destinations for COMESA cotton (Exhibit 41). The top COMESA producer, Egypt, exports primarily to Asia, with 22 percent of exports going to India, another 22 percent to China, 17 percent to Pakistan and 12 percent to Bangladesh. COMESA's second-largest cotton producer, Zimbabwe, is better integrated into regional value chains exporting 17 percent of its raw cotton to South Africa, its second-largest export partner, following India, 8 percent to Mozambique and 4 percent to Mauritius¹⁹¹. COMESA's third-largest producer, Zambia, sends 45 percent of exports to China, followed by South Africa, where it sends 24 percent of exports.

EXHIBIT 41

China and India are the largest export destinations for cotton from COMESA



SOURCE: FAOSTAT; UN COMTRADE; MIT

9.4 Government support for the sub-sector

In Burkina Faso, the government grants subsidies for cotton production to support farmers and companies. These include a minimum support price and input subsidies. The minimum support price is a floor price paid to farmers for seed cotton that is fixed annually. Under the support programme, if the floor price paid to farmers is higher than the actual price fetched by cotton companies in the market, the price-smoothing fund covers the difference¹⁹². The government and cotton companies also provide subsidies for seeds, fertiliser and urea to lower the input costs to farmers¹⁹³.

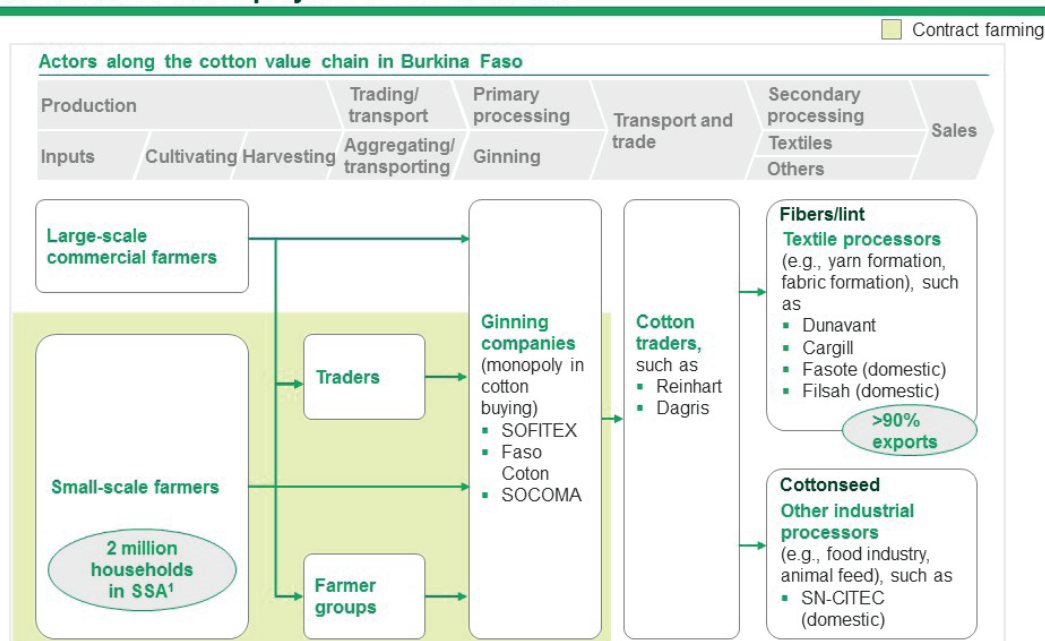
9.5 Value chain players

Burkina Faso's 362,000 smallholder farmers of Bt cotton, a genetically modified form with insecticidal properties, and conventional cotton are organised into 9,000 producer groups called GPCs. These farmers operate under contract agreements that give them access to inputs and training. The agreements also require them to sell their production to one of the country's three

cotton companies—SOFITEX, SOCOMA and Faso Coton, which buy 80 percent, 13 percent and 7 percent of the products, respectively^{194, 195, 196}—depending on where the farms are located¹⁹⁷.

EXHIBIT 42

Cotton value chain players in Burkina Faso



1 Sub-Saharan Africa

SOURCE: FAO; ACTIF; ITC; UNCTAD; expert interviews; press search

9.6 Constraints in the cotton sub-sector

9.6.1 Production

As mentioned above, Burkinabé farmers are required to sell their production to the three cotton companies—SOFITEX, SOCOMA and Faso Coton. These companies supply producers with quality inputs on credit, settle up input credits on collection of the seed cotton and buy all the seed cotton produced in their zones at a price no lower than the national floor price¹⁹⁸.

Farmers face two major production constraints: low profitability and low productivity.

Low profitability can be attributed to expensive inputs and the decreasing price of cotton. As part of their contract agreements, farmers are required to buy inputs on credit from cotton companies. While this system overcomes the problem of limited access to financing, the Ministry of Agriculture

notes that the inputs are expensive¹⁹⁹ and account for 40–50 percent of revenues²⁰⁰. In addition, cotton prices are volatile and have been decreasing. In Burkina Faso, prices for conventional and Bt cotton have fluctuated by 5 percent per year since 2006–2007. Between 2012/2013 and 2014/2015, prices decreased by 4 percent per year, from USD 0.40 per kilogram to USD 0.37 per kilogram²⁰¹. This volatility can discourage farmers from planting cotton: in 2011–2012, 8,000 farmers refused to plant cotton²⁰².

Low productivity is largely caused by low rates of mechanisation and irrigation. In Burkina Faso, 40 percent of cotton farms have traditional equipment (e.g., ploughs), 35 percent have no mechanised equipment, and only 25 percent have any powered equipment (e.g., tractors)²⁰³. Almost 100 percent of cotton farms are rain-fed, making them more vulnerable to unfavourable weather²⁰⁴.

9.6.2 Primary processing

In Burkina Faso, the unreliable electric grid and power failures inhibit ginnery activities for a few days every month during the five- to six-month ginning season²⁰⁵.

9.6.3 Trade and transport

Trade and transport are constrained by high costs. Transporting ginned cotton from the ginneries to the ports is expensive and time-consuming for many reasons. Companies do not have large enough fleets of trucks to transport all the ginned cotton and need to use the services of external providers. Burkina Faso is a landlocked country, so the ginned cotton must be transported vast distances to the closest ports²⁰⁶, Abidjan and Accra. In addition, poor rural road conditions make the transportation of goods difficult and time-consuming²⁰⁷.

9.6.4 Secondary processing

In Burkina Faso, secondary processing is limited, as less than 3 percent of cotton fibre is processed locally. Cotton exports therefore focus on low value-added products²⁰⁸.

The local cotton-fibre processing industry is small, with just two large textile companies: FASOTE, which specialises in fabric dyeing and printing, and FILSAH, which specialises in yarn production²⁰⁹. The development of downstream textile activities has been limited, mainly because of the high investment required as well as the unstable and expensive access to electricity and water²¹⁰. In addition, there is limited domestic and regional demand for Burkinabé cotton, as African demand for clothing is mainly directed at cheaper textiles and second-hand clothing^{211, 212}.

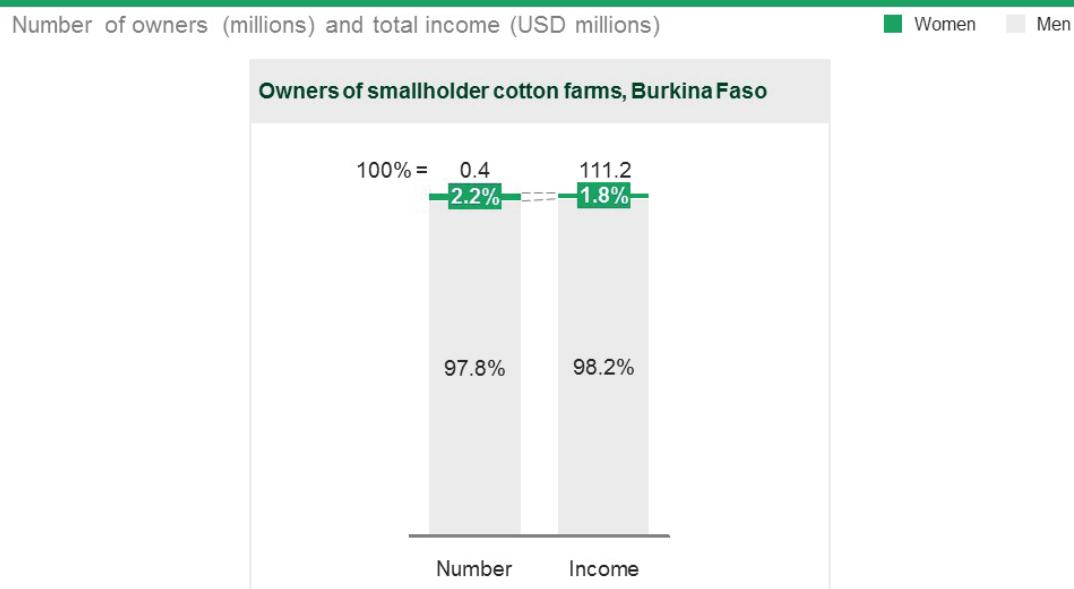
Finally, the growth of artisanal textiles has been limited. Manual spinning methods have not improved over the last decade and have very low productivity. Artisanal textiles also face competition from developing industrial textiles^{213, 214}.

9.7 The role of women in cotton

In Burkina Faso, women account for approximately 50 percent of the farming labour force, but in most cases they are unremunerated and do not have control of revenues. They account for 2.2 percent of the 362,000 smallholder farmers who are members of GPCs that receive revenues from the cotton they grow. These women GPC members receive about 1.8 percent of the total revenue generated from cotton (Exhibit 43). Of the 9,000 GPCs, only 43 (0.5 percent) are women-exclusive. When women are members of GPCs that are not exclusive to women, they face a number of constraints.

EXHIBIT 43

Women account for 2.2% of smallholder cotton farm owners and capture less than 1.8% of the income generated



SOURCE: Field visits; expert interviews; ICAC; press search

9.7.1 Production

In Burkina Faso, only GPC members receive income from the cotton companies. Women who work on household cotton fields and who are not GPC members usually do not know how much revenue their husbands receive or how they spend it²¹⁵.

In some cases, fields (often small parcels of poor land) are “lent” to women by male landowners, usually family members, and there is a risk the landowner may decide to take back the plot if the productivity of the plot increases. As a result, women are less likely to benefit from their work over time.

In West Africa, women have a low involvement in field activities, such as the use of pesticides and fertilisers, where they are 5–20 percent of the workforce. However, their participation in picking reaches 55–65 percent²¹⁶.

Women are generally more empowered economically in East African countries. The structure of the cotton market also plays an important role: in East Africa, farmers (many of them women) deal directly with cotton companies²¹⁷.

9.7.2 Primary processing

In Burkina Faso, women account for just 2 percent of ginnery labourers, including seasonal and permanent staff²¹⁸. They are usually in charge of administrative work and do not participate in the seasonal workforce, which accounts for three-quarters of staff, mainly because of the demanding nature of the work (eight-hour day and night shifts)²¹⁹.

As in production, the level of women’s participation in ginning activities differs in East Africa where women account for 40–70 percent of ginnery staff. However, men still tend to dominate ginnery work, including positions of authority, while women perform administrative roles²²⁰.

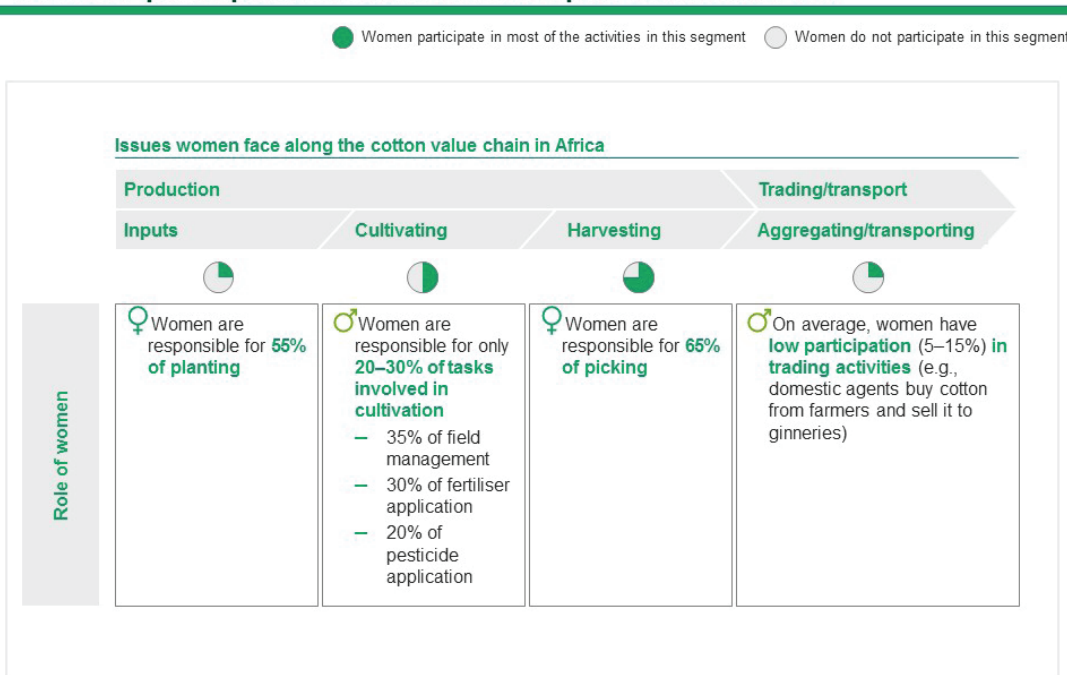
9.7.3 Trade and transport

Women’s participation in trade and transport activities is also low (Exhibit 44). In Burkina Faso, women do not participate in cotton trade and transport from farms to local markets and from ginneries to ports. They do not carry cotton from the field to the local markets because they do not have access to transportation and because transportation and selling is perceived to be a man’s job. Nor do they participate in the transportation of ginned cotton from the ginneries to the ports: Burkina Faso’s 35 transporter groups have no women members.

On average, women account for just 10 percent of the trade and transport workforce in West Africa and approximately 30 percent in East Africa²²¹.

EXHIBIT 44

Women’s participation in trade and transport activities is low



SOURCE: FAO; expert interviews; ITC; OECD; field visits

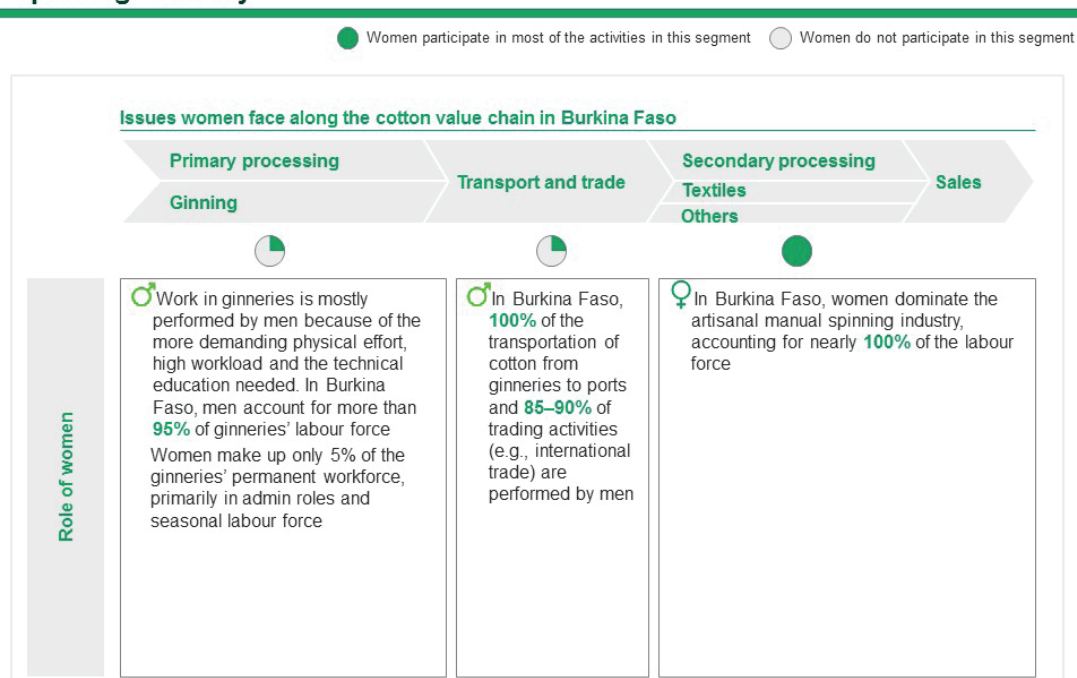
9.7.4 Secondary processing

While textile activities are usually dominated by women (e.g., in Asia, women account for 90 percent of the labour force involved in garment production), these activities are not very developed in Africa.

In Burkina Faso, women account for close to 100 percent of the artisanal manual spinning industry (Exhibit 45).

EXHIBIT 45

In Burkina Faso, women account for close to 100% of the artisanal manual spinning industry



SOURCE: ITC; FAO; UNIDO; expert interviews; field visits

9.8 Constraints for women in cotton

9.8.1 Production

In Burkina Faso, women face a number of constraints in cotton production. The biggest of these is land tenure, which limits their access to financing, their representation in cotton producer groups and their access to extension services, yields and crop revenues.

Despite the existence of state policies to ensure fair access to land for the entire rural population and equal ownership rights for men and women, the reality is that women's ownership is limited. According to IFPRI, only 12 percent of women are the sole owners of land compared to 54 percent of men. While women legally have the right to inherit land, customary law does not recognise this and male relatives often claim land from widows, while girls often lose their land to their brothers²²².

In Burkina Faso, just 2 percent of cotton farmers who are remunerated are women²²³. The resulting lack of financial security puts women at a disadvantage when accessing bank loans because formal financial institutions consider women "high-risk" applicants²²⁴.

Limited land tenure also means that women are under-represented in producer organisations, as membership criteria are based on the amount of land available for cotton production and status as head of household. Women who do not control land therefore have limited access to the inputs and extension services provided by the cotton companies to members of producer organisations²²⁵: cotton companies provide GPC members with inputs (seeds, fertilisers, herbicides and pesticides), but women who are not members or are members of mixed GPCs have limited access to these and often do not receive their fair share. The head of the household receives the inputs from cotton companies and may not distribute them fairly to farm workers. Female heads of households who are members of mixed GPCs do receive inputs, but for cultural or religious reasons they are prevented from participating in related decisions or negotiations²²⁶.

Finally, women's productivity is 20 percent lower than that of men. Although women often have their own plots where they grow food and some cotton, they have to take care of their households and other farm-related chores before they can look after their own cotton fields²²⁷.

9.8.2 Primary processing

In Burkina Faso, women's participation in the ginnery labour force is low because the physically demanding nature of the job is not attractive to them and they often lack the skills to take on administrative jobs²²⁸. In addition, cotton companies do not have gender policies to encourage women's participation²²⁹.

9.8.3 Secondary processing

Although women dominate artisanal textile activities, their productivity is low, largely because manual spinning methods have not improved for decades. It is also a competitive market, as the pressure from developing industrial textiles is increasing.

9.9 Opportunities for women in cotton

The issue of land tenure will not be easy to address in Burkina Faso. While the opportunities described below do not directly address land tenure, they offer a way for women to have some control over crop revenues for the fields that they manage and to contribute to household income. There is, however, always the risk that they could lose this land at any point and that they will continue to be unremunerated for work on fields managed by their husbands. There are two opportunities to increase women's economic empowerment (although landowners will retain the power to grant them land):

- **Work with cotton companies or unions** to increase the number of women-only GPCs; and
- **Increase the number of women farming organic cotton** by linking them to international buyers, training them in organic farming practices, and providing access to inputs.

These efforts will succeed only if women are able to farm the same land over time. The risk is that landowners—mainly men—can take the land back at any time.

Potential partners include the production union and the three cotton companies.

Details on each of these opportunities are provided in the remainder of the section.

9.9.1 Work with cotton companies or unions to increase the number of women-only GPCs

Organising women-only GPCs could increase women’s access to inputs and training and give them control over revenues as they would then have a direct link to the cotton companies that buy their production, while male heads of households receive the revenues from cotton companies and often do not distribute them to farm workers²³⁰.

Women-only GPCs would also improve women’s access to the training and extension services provided by cotton companies. Women who are not members receive no training, and often women members of mixed GPCs are not informed about training or not expected to attend, for cultural or religious reasons²³¹.

Ginning companies or unions could fund the creation of women-only GPCs by providing extension services. They would also need to help women get access to land. This could be done by raising awareness among male heads of households about the economic advantages of women-only GPCs, such as the additional revenues they could generate for the household.

9.9.2 Increase the number of women farming organic cotton

Organic cotton is perceived as a “women’s crop” in Burkina Faso. As such, higher women’s participation is likely to be accepted. Today, 48 percent of organic fair-trade cotton farmers are women and their average estimated yearly revenues are USD 150–200 (for an average land parcel of 1.38 hectares).

Organic cotton presents many advantages for women farmers: it requires limited resources, it can be grown on small land parcels, it is cheaper than other types of cotton and it requires limited credit (mainly because inputs are few). Most of the work can be done by women and it offers access to crop revenues.

Partnerships with unions or cotton companies could help increase the number of women farming organic cotton.

Case study: GPC Gwadiba

GPC Gwadiba, which means “good cooking” in Bambara, is a successful women-only GPC created in 2000. It is the only exclusively female GPC out of 1,625 groups in the cotton region of Boucle du Mouhoun²³². The objective of its 11 members was to become economically independent and to contribute to household revenues²³³.

The main challenges GPC Gwadiba members face are dependence on their husbands to access land and equipment and to complete some farming activities as well as the lack of time to farm their fields.

None of the members are landowners and farm plots are given to them by their husbands. The plots tend to be poor, unfertile land that requires soil treatment to make it productive. The GPC Gwadiba women do not own their own equipment and need to use their husbands’ tools²³⁴.

The women depend on their husbands to do some of the more physically demanding farming work and they need to wait for their husbands to have the time to do this. For example, during the rainy season when it is time to pre-sow the land and sow grain, the men work on their own land first. As a result, the seed is sown late on the women’s land and this can have a negative impact on yields²³⁵. The women are also expected to work on their husbands’ cotton fields and complete their household chores before they can look after their own cotton fields²³⁶.

Despite these challenges, the members of the GPC Gwadiba produce and sell cotton year after year thanks to the support they receive from their husbands and the cotton association in charge of the Boucle du Mouhoun region. Their husbands agree to provide them with more and more land every year. In the 2012–2013 campaign, GPC Gwadiba was farming 13 hectares of cotton and planned to more than double this to 30 hectares in 2013–2014²³⁷. The women receive strong support from the regional cotton association, which makes sure that members receive inputs on time and provides technical assistance. Women are more likely to use the technical guidance extension services than men, according to Abdoulayé Koumare, head of the Boucle de Mouhoun cotton region²³⁸.

In the 2012–2013 campaign, the GPC Gwadiba produced more than 16 tonnes of cotton which sold for USD 4,480, giving each member an average yearly revenue of USD 400²³⁹. They achieved an average yield of 1,243 kilogram per hectare, higher than the regional average of 980 kilogram per hectare²⁴⁰ and the national average of 420 kilogram per hectare.

The group’s president, Mme Mauton Sé, states that the members are proud of the benefits they derive from their work and control their crop revenues. They use their money to buy clothes for their children and to improve the quality of food they serve in their homes²⁴¹.

10 CASSAVA

Cassava was selected for this study due to its high production value and contribution to regional food security as well as its fit with the AfDB's OSAN Agriculture Sector Strategy 2010–2014. Cassava also presents opportunities to expand export market share and integration into regional and global value chains through improved processing techniques.

10.1 Executive summary

Demand for cassava has been increasing, driven by the need to provide food security for growing populations in emerging markets and growing demand for cassava's industrial by-products. Between 2003 and 2013, production volumes grew 3 percent per year to 280 million tonnes.

African producers have the opportunity to play a bigger role in cassava's global value chain. In 2013, the top three producers in Africa—Nigeria, DRC and Angola—accounted for over half of global production but less than 1 percent of global exports. This imbalance is due to the fact that there is strong domestic demand and that virtually all exported cassava is in the form of processed food and industrial products, of which African countries produce very little.

For example, Nigeria—the largest producer of cassava in the world—accounts for roughly 20 percent of global production but exports less than 1 percent of its crop. By contrast, Thailand—the world's largest exporter of cassava—accounts for 11 percent of global cassava production but 65 percent of global exports. To remedy the export imbalance, African countries will need to increase their yields, reduce production costs, build more industrial processing facilities and improve their links to global markets for industrial products.

Nigeria's yields are low: 13.9 tonnes per hectare vs. 22.5 tonnes per hectare in Indonesia. This is because the 6 million smallholder farmers who produce more than 90 percent of the cassava in Nigeria do not use improved varieties, have little agronomic knowledge and use limited mechanisation for clearing land and cultivation.

Ninety percent of processing in Nigeria is done by small-scale processors who lack access to reliable sources of electricity and the capital to buy efficient, modern processing equipment, resulting in high levels of waste in processing and low quality *garri* and *fufu*. There is limited industrial processing, as potential investors are hesitant to build large, capital-intensive plants without guaranteed contracts from purchasers.

In Nigeria, 25 percent of smallholder farmers are women, but they capture only 17 percent of income. In addition, 90 percent of traditional processing is done by women. Most labour on smallholder and commercial farms and further down the value chain is provided by men. Where women are employed, they typically earn lower wages and perform manual tasks, as they are not trained to use machinery.

Women cassava producers and processors face a number of constraints. First, smallholder women

farmers tend to be 25–30 percent less productive than men: they apply less fertiliser per hectare than men, they have less training in agronomic practices and they are responsible for household chores, which reduces the time available to farm. Women, who make up 90 percent of small-scale processors, lack access to reliable sources of electricity and the capital to buy efficient, modern processing equipment. Finally, women commercial processors may produce less due to limited working capital with which to run their operations.

Cassava offers three opportunities to empower women to access higher and steadier revenues:

- Increase the incomes of women smallholder farmers by improving their productivity and establishing links with large-scale industrial processors;
- Increase the incomes of women smallholder processors by providing funding and training; and
- Develop large-scale, women-owned, commercial-processing plants that will produce high value-added industrial cassava products.

Potential partners include the IITA and Nigeria's Federal Ministry of Agriculture and Rural Development.

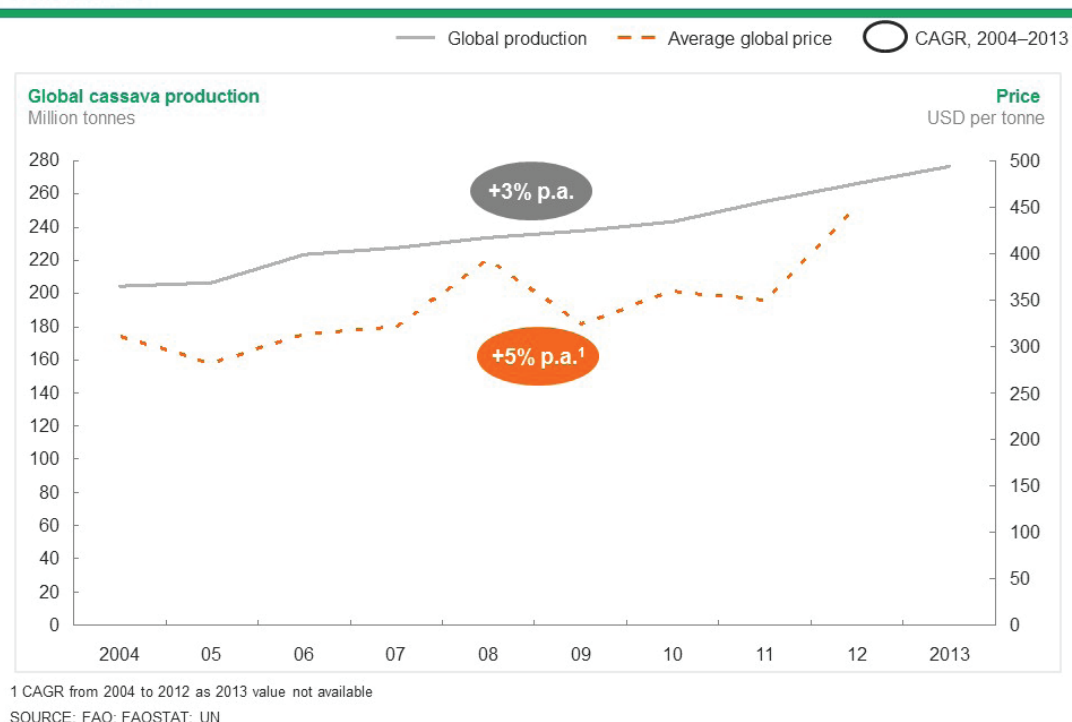
10.2 Global and African trends

Demand and supply

Global production of cassava grew significantly from 2004 to 2013 and, while prices fluctuated, overall they increased at an average rate of 5% p.a. over this time period (Exhibit 46). Since 2004, production grew 3 percent per year to reach 276.8 million tonnes in 2013. While prices have fluctuated between 2004 and 2012, they have increased by 5 percent per year over this time. This growth is likely to continue and has been driven principally by population expansion and increased demand for processed cassava products. For example, Africa's population is forecast to increase by 2.5 percent per year, increasing the appetite for drought-resistant, sturdy, high-calorie foods. Cassava fills this need by producing 250,000 calories per hectare per day, more than maize (200,000 calories per hectare per day) or wheat (110,000 calories per hectare per day).

EXHIBIT 46

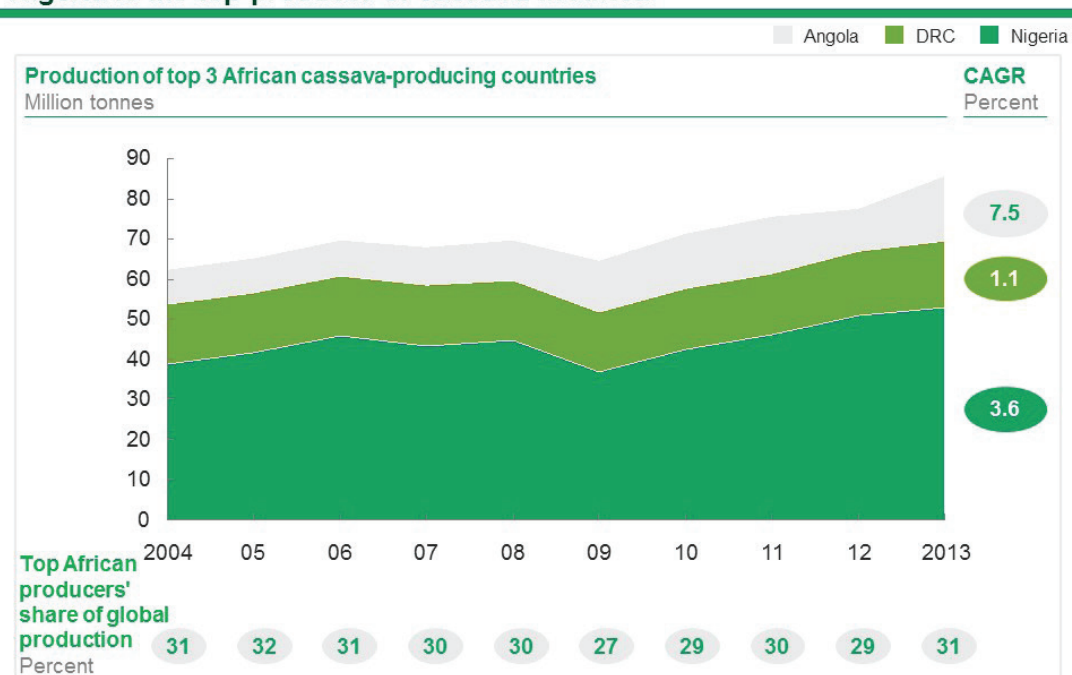
Global cassava production has steadily increased, while prices have fluctuated



At 54 percent, Africa accounted for the majority of global cassava production in 2013. Nigeria is the top African and world producer, accounting for 34 percent of African production and roughly 20 percent of global production²⁴² (Exhibit 47). Each of the DRC and Angola²⁴³ account for 10 percent of African production and represent approximately half the scale of Thailand, Indonesia and Brazil, which produce 11 percent, 9 percent and 8 percent of the world’s cassava, respectively (2013).

EXHIBIT 47

Nigeria is the top producer of cassava in Africa



SOURCE: FAO; FAOSTAT; expert interviews

10.2.2 Prices

Cassava prices vary greatly from country to country, as there is no global commodity market and production costs differ vastly due to varying levels of mechanisation. For example, in 2012, the average price for cassava was USD 161 per tonne in Nigeria, which is 10 percent mechanised and USD 67 per tonne in Thailand, which is highly mechanised.

10.2.3 Yields

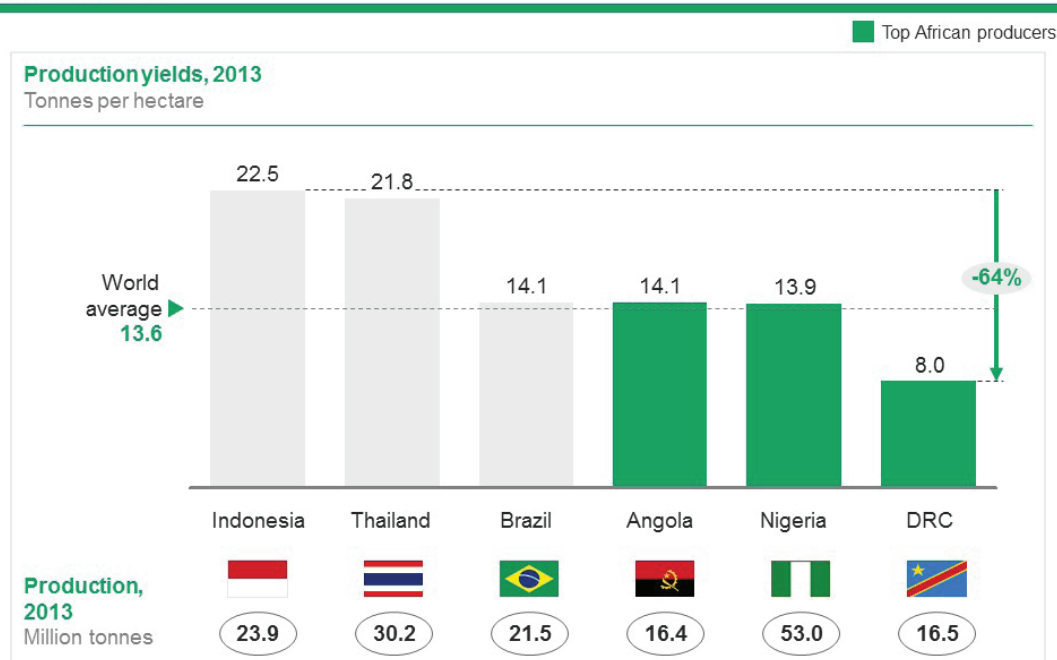
The yields of African cassava producers are 37–64 percent below the global benchmark (Exhibit 48). In 2013, Nigeria reached 14.1 tonnes per hectare, similar to Brazil²⁴⁴ but roughly 37 percent less than Indonesia (22.5 tonnes per hectare) and Thailand (21.8 tonnes per hectare)²⁴⁵.

The yields of the other top African producers are also low (Exhibit 48). Angola achieved yields similar to those of Nigeria at 14.1 tonnes per hectare. DRC's 2013 yield was 8.0 tonnes per hectare, less than 60 percent of Nigeria's yield. Yields are low by global standards, mainly due to the prevalence

of traditional farming techniques, e.g., low levels of mechanisation (tractors are used in just 10 percent of Nigeria’s cassava cultivation) and low adoption of improved inputs (e.g., only 3 percent of farmers in southeastern Nigeria use herbicides).

EXHIBIT 48

The yields of top African cassava producers are as much as 64% below the global leader



SOURCE: FAOSTAT

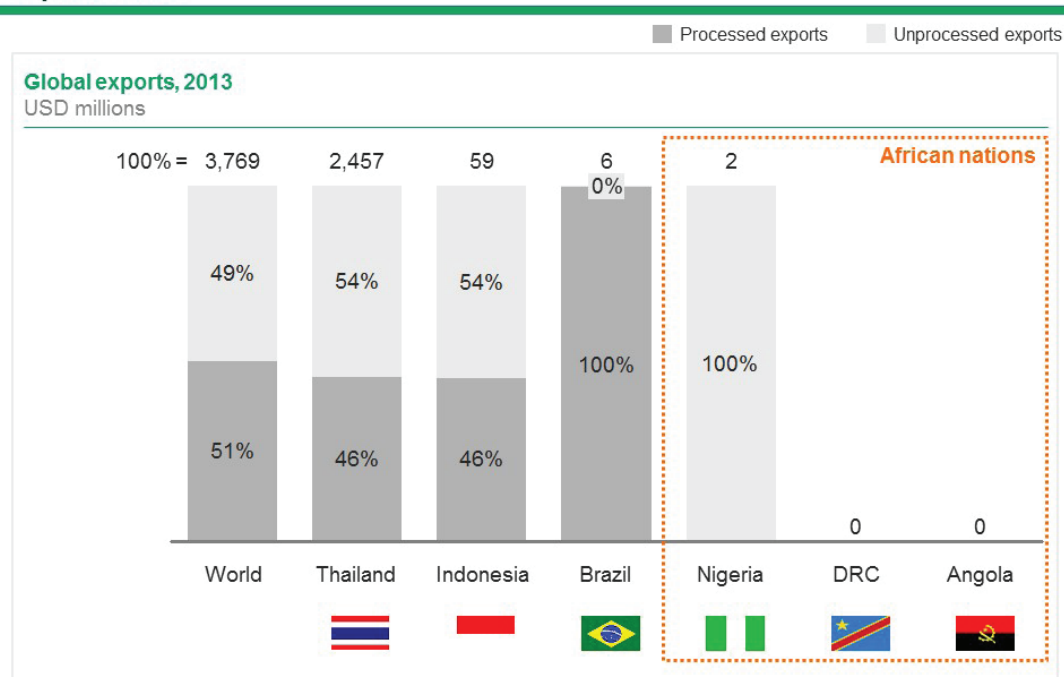
10.2.4 Exports

Africa’s cassava production is limited almost entirely to domestic consumption, with almost no exports (Exhibit 49): in 2013, the top three producers (Nigeria, DRC and Angola) accounted for 57 percent of global production but less than 1 percent of global exports. This suggests a significant opportunity for African producers to play a bigger role in cassava’s global value chain.

Africa’s trade dynamics differ from those of the other large producers. Nigeria accounts for roughly 20 percent of global production but exports less than 1 percent of what it produces. By contrast, Thailand—the world’s largest exporter of cassava—produces 11 percent and exports 65 percent of cassava globally. In 2013, global cassava exports totalled USD 3.8 billion. Unprocessed (dried) cassava accounted for 50 percent; processed cassava (starch) made up the other 50 percent.

EXHIBIT 49

Africa's cassava producers have limited exports, all of which are unprocessed



SOURCE: FAOSTAT

10.3 Regional and global trade flows—ECOWAS and COMESA

10.3.1 ECOWAS regional and global trade flows

Nigeria's 2013 cassava exports were limited (about USD 1 million); most was exported to the surrounding region (61 percent to Niger and Togo) and the rest to the US (24 percent) and China (7 percent).

10.3.2 COMESA regional and global trade flows

Cassava in DRC is grown by “nearly every rural and peri-urban household” on small plots. Cassava accounts for 55 percent of per-capita calorie consumption in DRC and is a dual purpose crop, with leaves serving as the principal ingredient of the Congolese vegetable dish pondou and the root being ground into flour. Congolese smallholders consume 70–80 percent of their own production with the remainder traded at local markets. The market in Kinshasa is the largest local market with 600,000–800,000 tonnes traded annually²⁴⁶. While DRC has had no significant exports of cassava

in any form since the 1970s, its limited exports are largely to neighbouring countries (e.g., DRC) with very little exported outside of COMESA²⁴⁷ (i.e., less than USD 50,000 in 2014, 90 percent of which went to France)²⁴⁸.

10.4 Government support for the sub-sector

Nigeria's Federal Ministry of Agriculture and Rural Development is actively promoting the production and processing of cassava.

To support commercial processing, the government has implemented policies, including corporate tax and other incentives. These include a 12 percent rebate for bakeries that use at least 40 percent cassava in bread and other confectioneries and zero import duties on cassava-processing equipment²⁴⁹. The government is also developing two staple crop processing zones (SCPZs) in Kogi and Ogun states to support the industrial processing of cassava²⁵⁰. It has also mandated that baked goods include 10 percent high-quality cassava flour (HQCF) by 2015, but to date, HQCF producers have failed to produce enough flour to reach this threshold, achieving only enough for 2.5 percent HQCF in baked goods.

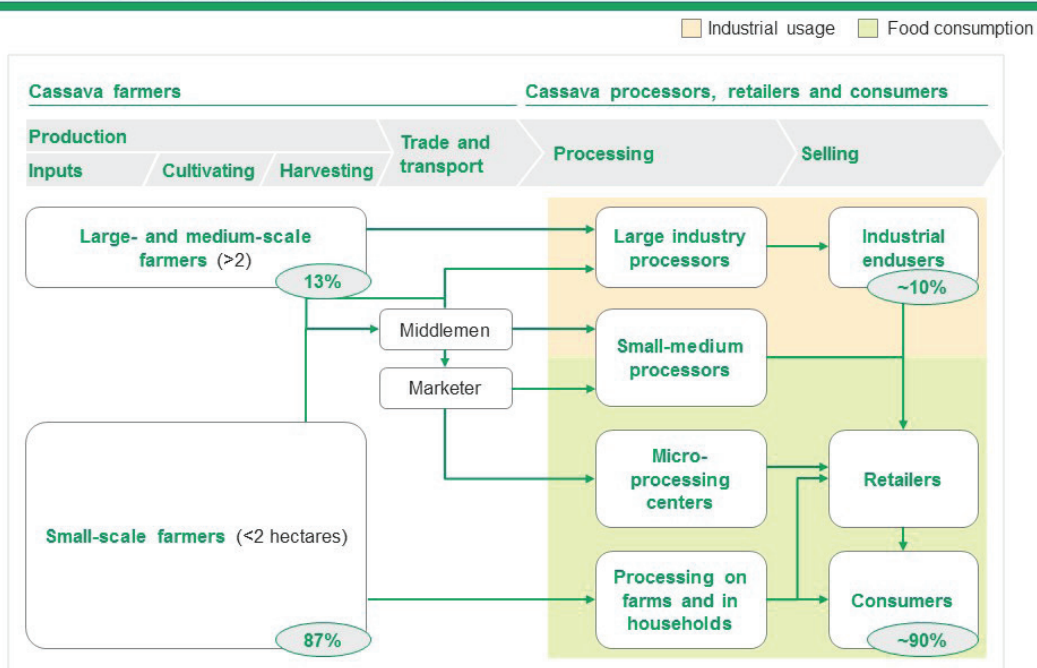
The government is actively promoting the farming of cassava. As of 2014, the government had cleared 5,300 hectares of land for cassava and overseen the planting of cassava on 2,000 hectares. The savings from reduced importation of wheat have also been earmarked for cassava: USD 120 million is held by the Bank of Agriculture to fund mechanisation, planting materials and training in improved agronomic practices, while USD 170 million is held by the Bank of Industry to fund the purchasing of processing equipment.

10.5 Value chain players

Nigeria's cassava value chain is highly fragmented, with 6 million smallholder farmers accounting for almost 90 percent of the production base (Exhibit 50). Most of the processing is done in micro- and small processing facilities, with a few commercial producers accounting for 10 percent of processing.

EXHIBIT 50

Cassava value chain players in Nigeria



SOURCE: FAO; press search

The major commercial cassava processors in Nigeria are:

- HQCF: Thai Farm, DATCO, Eagleson Cassava, Niji Farms
- Starch: Nigerian Starch Mills, Matna Foods, Green Life, Psaltry International
- Sweetener: Ekho Agro, Cargill
- Ethanol: Allied Atlantic Factory.

Another key player is IITA, a research institution that develops higher-quality cassava varieties. For example, it has developed varieties that are higher-yielding and more nutritious with a higher vitamin A content (Harvest Plus cassava).

10.6 Constraints in the cassava sub-sector

10.6.1 Production

Nigeria faces a series of constraints with regards to its cassava production. These include limited adoption of improved seeds and use of herbicides, near-universal lack of good agronomic techniques and limited access to financing to purchase equipment and improved inputs.

Smallholder farmers rarely use improved seeds or planting materials (clean, healthy seeds) and the sub-sector is dominated by disease-prone local varieties with long maturation periods and low-yield potential. The IITA has developed 40 new varieties of high-yielding, disease-resistant cassava seeds that have the potential to raise productivity by up to 30–40 tonnes per hectare. While the combination of these new varieties and better agronomic practices could increase yields per unit area by 40 percent²⁵¹, the rate of adoption by smallholder farmers has been low.

Farmers are slow to adopt the new varieties because of a weak extension system, insufficient quantities of planting material and delays in distributing the improved planting materials. Private companies are not involved in distribution because cassava is propagated vegetatively and it takes a year to produce cassava planting material compared to three to five months for grain seeds²⁵².

Low use of herbicides and pesticides presents another obstacle. Most farmers use insufficient amounts of herbicides²⁵³; increasing these would reduce the need for weeding and free up labour for planting. In southeastern Nigeria, only 3 percent of farmers use herbicides because they do not know about them, they lack the technical skills to use them, or are under pressure from local NGOs to avoid them. Fertilisers are also used either infrequently or in insufficient amounts because they are costly. Finally, the limited use of irrigation is also a constraint²⁵⁴; most cassava plantations are rain-fed (77 percent in the state of Benue).

Nigerian cassava farming is highly labour-intensive, and related costs can account for up to 90 percent of total production costs. For example, the cost of developing and preparing land is quite high. Primary field research in Oyo and Benue states show that of the average cassava production cost of USD 700 per hectare, 98 percent is labour (ridging, planting, weeding, etc.) and 2 percent is inputs (fertilisers, seeds)²⁵⁵.

Small-scale cultivation is characterised by a low level of mechanisation²⁵⁶. For example, in Nigeria, tractors are used in only 10 percent of cassava production. Harvesting is usually done manually as well and is therefore time-consuming and expensive. In both small-scale and commercial farming²⁵⁷, 8–12 percent of cassava roots are lost because of sub-optimal harvesting methods, underdeveloped or woody tubers and disease.

Both commercial and smallholder farmers have limited access to finance: Nigeria's agricultural sector accounts for 42 percent of GDP but just 2 percent of all formal credit flows. There are several

reasons for this: requirement for obtaining a loan from a bank are stringent, interest rates are high (17–25 percent²⁵⁸) and commercial banks do not offer attractive payment terms for agricultural activities (e.g., fixed repayment periods that may not match annual crop cycles, especially when loan release is not coordinated with growing cycles). As a result of these financing constraints, commercial farmers may produce lower volumes.

10.6.2 Primary processing

The Nigerian cassava-processing network is primarily made up of small-scale, low-quality processors whose productivity is low because they use traditional methods and manual equipment. Only a few large-scale commercial players exist in each processed product segment.

Many small-scale processors lack access to reliable sources of electricity and the capital to buy efficient, modern processing equipment, resulting in high levels of waste and low-quality *garri* and *fufu*.

The biggest challenge for commercial cassava processing is sourcing sufficient supply at consistently high-quality cassava. Because commercial cassava processors are more likely to source their raw material from smallholder farmers, there is a large variation in the size and quality of the cassava. Processors have strict requirements, such as high DMC (dry matter content), starch content, flavour and consistency in size. To increase the quality, some processors provide inputs to the farmers, such as high-yielding and high-starch content cassava and fertilisers, use of bulldozers and tractors to ridge and clear the land as well as mobile processing units that perform initial wet-processing near the farms. In addition, the sale price of HQCF is regulated by the federal government and has not changed in the last three years. This has kept revenue per tonne constant for processors, while their cost per tonne has increased.

Other challenges include the lack of consistent grid power, limited access to water and a lack of affordable financing to invest and run processing at scale.

10.6.3 Trade and transport

Smallholder cassava producers have limited access to markets. Because of high transportation costs and the need to process cassava within 48 hours of harvesting, before it is rendered inedible, they sell most of their product at local markets.

High fragmentation of producers and poor infrastructure make it difficult to develop commercial-scale aggregation. Sub-optimal roads and storage facilities drive up prices, for example, by contributing to a loss of cassava in transportation of 2–7 percent²⁵⁹.

10.7 The role of women in cassava

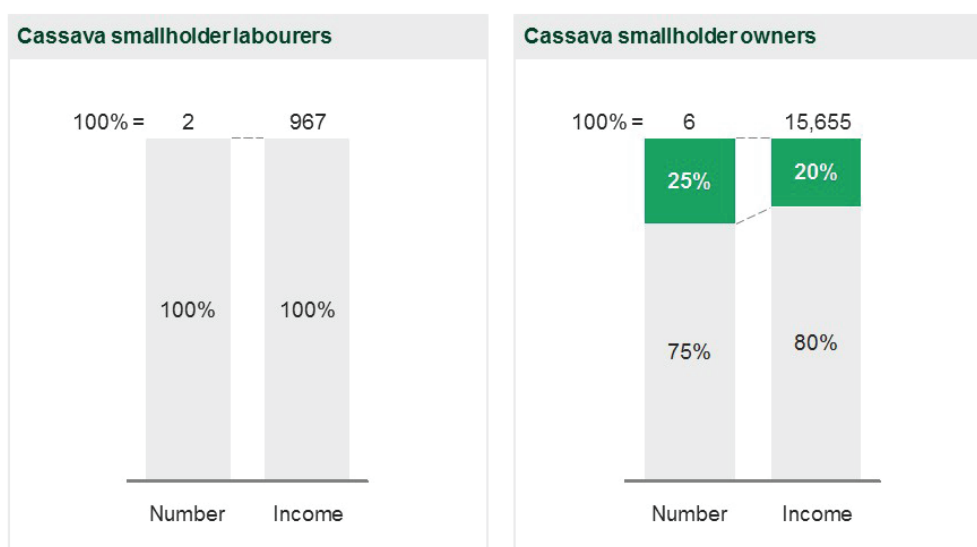
10.7.1 Production

Of Nigeria's 6 million smallholder farmers of cassava, 1.5 million (25 percent) are women, but they receive only 20 percent of the USD 15 billion earned (Exhibit 51). It is estimated that almost all of the approximately 1.7 million paid labourers on smallholder cassava farms in Nigeria are men who earn an estimated USD 0.9–1 billion in wages per year.

EXHIBIT 51

For smallholder cassava farms in Nigeria, men constitute 100% of the labourforce; women own 25% of the farms, but earn only 20% of the revenues

Number of labourers, owners (millions) and total income (USD million) ■ Women ■ Men

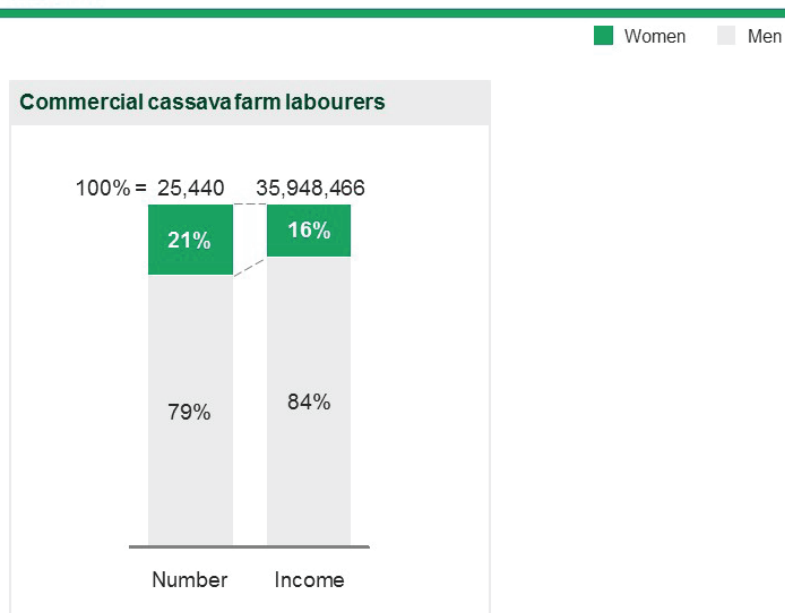


SOURCE: Nigeria Bureau of Statistics; FAO; expert interviews

Women account for 21 percent of the 25,000–30,000 labourers on commercial farms in Nigeria but earn just 16 percent of the income (Exhibit 52). Their income is lower, as they are not trained to use mechanised equipment such as tractors and bulldozers. Men clear the land, plant the cassava, plough the land and harvest the crops. Women support planting and harvesting, e.g., by handing men the seedlings to plant and hauling harvested tubers from the farms into trucks.

EXHIBIT 52

In Nigeria, women account for 21% of commercial cassava farm labour but earn only 16% of the income



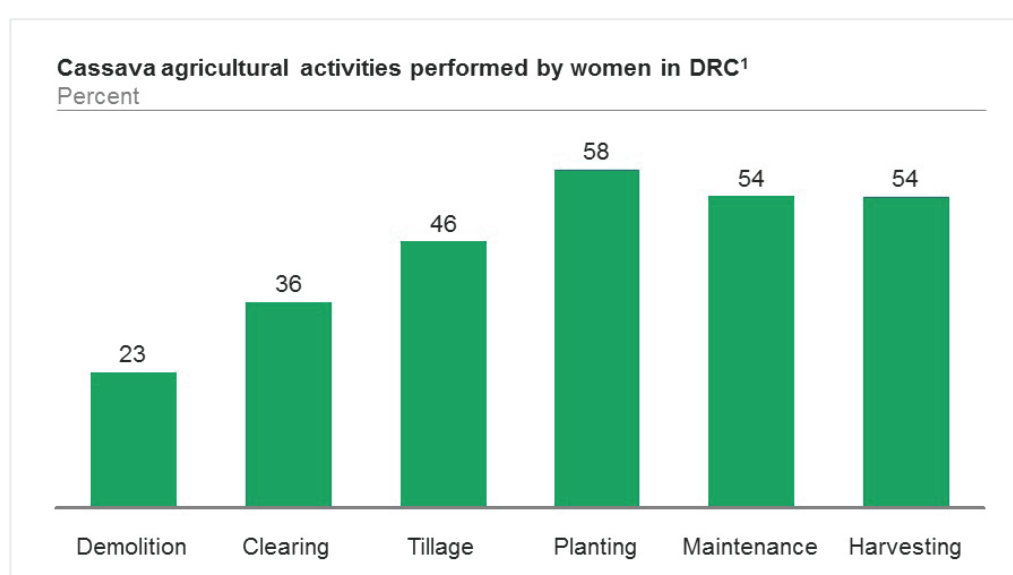
SOURCE: Nigeria Bureau of Statistics; FAO; expert interviews

The role women play in cassava varies significantly across regions due to cultural differences. In southeastern Nigeria, for example, women are much more involved in growing cassava than in the north. Women make up 15 percent of the harvesting labour force in Kwara state and 81 percent in Imo state.

In contrast to Nigeria, in DRC, where the largest producer of cassava is COMESA, the crop is grown primarily by families, with women accounting for more than 50 percent of the workforce in planting, maintaining and harvesting cassava²⁶⁰ (Exhibit 53).

EXHIBIT 53

Women compose more than 50% of the workforce in the planting, maintenance and harvesting of cassava in DRC



¹ Based on sample of four provinces: Kinshasa, Bas-Congo, Bandundu and Katanga
SOURCE: International Food Policy Research Institute

10.7.2 Primary processing

In Nigeria, women dominate small-scale processing. They own approximately 90 percent of micro- and small processors, earning USD 4–4.5 billion in revenues. They account for almost all of the 3.7–4 million labourers in processing, which is viewed as a woman’s activity²⁶¹. They handle the time- and labour-intensive manual tasks such as peeling, inspecting, frying and sifting/sieving, and earn USD 900–1,000 a year. Peelers are typically paid by the weight of cassava they peel daily.

In Nigeria, women make up 60 percent of the estimated 70,000 labourers in commercial processing. They tend to be temporary wage earners or casual labourers²⁶², and as they are not trained to use the processing machinery, they are limited to manual tasks. They therefore only earn 50 percent of the USD 70–75 million in annual earnings. In Oyo state, for example, women make up 90–100 percent of the labour that performs peeling, washing, sifting, frying and drying, but only about 10–15 percent²⁶³ in grating, pressing and milling (the top three mechanised processing operations, which are dominated by men).

We identified two commercial processing plants owned by women in Nigeria: Eagleson Cassava (which manufactures HQCF) and Psaltry International (which manufactures starch).

Similarly, in DRC, following harvesting, women have a primary role in processing cassava into its end products (e.g., peeling, boiling, drying and cutting or pounding into flour).

10.7.3 Trade and transport

In Nigeria, women have a high participation rate in transporting crops from farms to homes, accounting for 80 percent of the workforce²⁶⁴, while men tend to dominate in wholesaling into regional-trade markets.

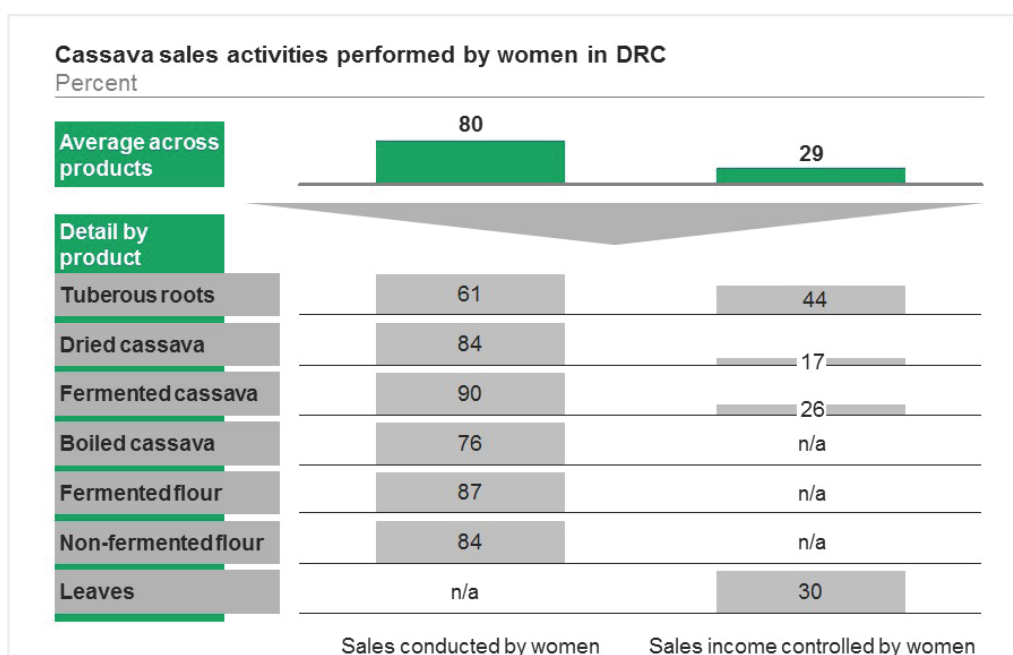
10.7.4 Sales

In Nigeria, women are very involved in marketing and selling cassava products in traditional markets but less so in industrial end markets.

In DRC, while 70–80 percent of cassava is eaten locally by the farmers who grow it, the remainder of the crop is sold or traded at markets. The involvement of women varies by product, but on average, while women conduct the majority of sales (80 percent), they retain control of only a small portion of that income (less than 30 percent) (Exhibit 54).

EXHIBIT 54

While 80% of DRC cassava sales are conducted by women, women retain control of only 29% of this income



SOURCE: International Food Policy Research Institute

10.8 Constraints for women in cassava

10.8.1 Production

Women in Nigeria have limited access to assets (e.g., land), capital, information and extension services²⁶⁵ (Exhibits 55, 56).

Civil law entitles women to own land, and a few states have passed equal inheritance rights into law. However, customary law stipulates that only men have the right to inherit and own land. As a result, women account for just 25 percent of smallholder farmers²⁶⁶.

Farm plots managed by women produce roughly 25–30 percent less per hectare than plots managed by men. This is due to several factors: women tend to apply less fertiliser per hectare than men, they have less training in agronomic practices and they are responsible for household chores, which reduce the time available to farm²⁶⁷.

Finally, women have limited access to financial resources. Lack of collateral restricts their access to financial services, including bank loans, and in some cases, financial institutions demand the consent of a woman’s husband before granting a loan²⁶⁸.

EXHIBIT 55

Women lack access to mechanised equipment, are confined to petty trading, and have limited access to industrial end markets (1/2)

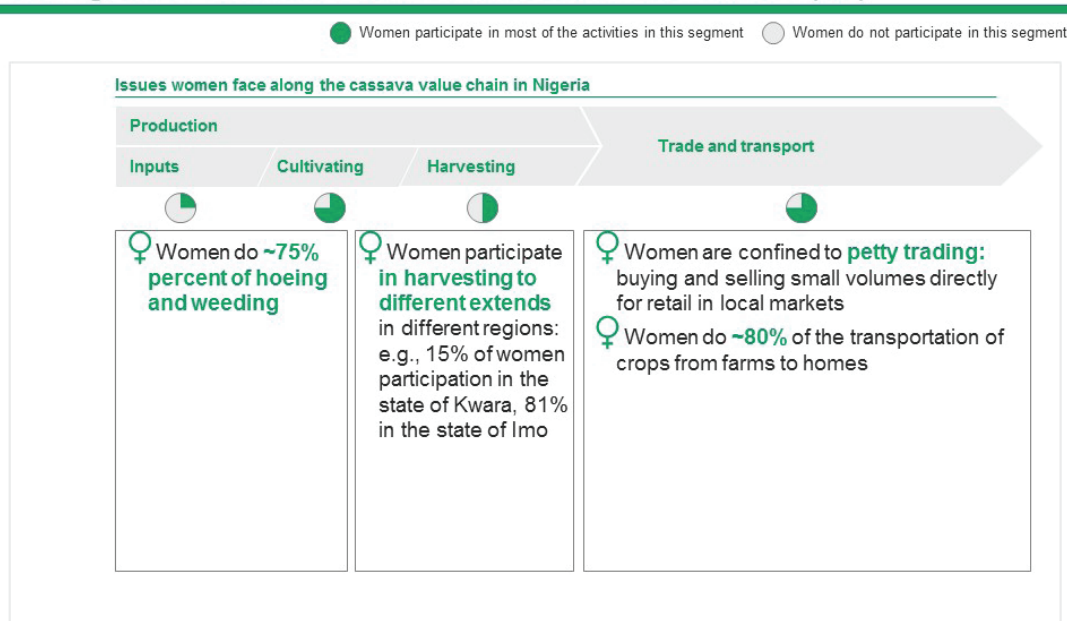
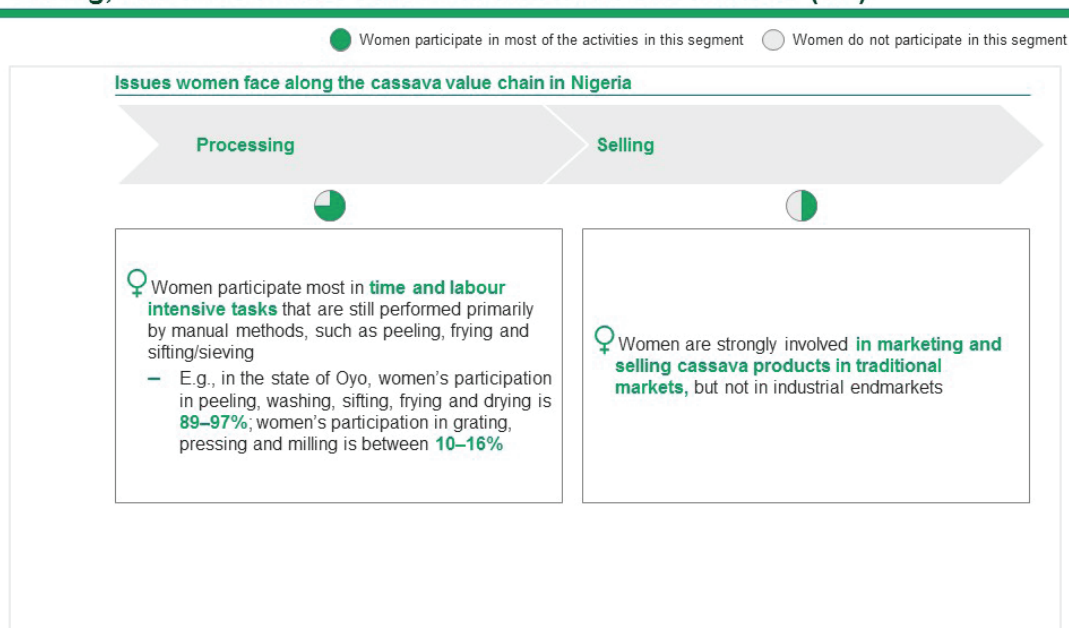


EXHIBIT 56

Women lack access to mechanised equipment, are confined to petty trading, and have limited access to industrial end markets (2/2)



SOURCE: IFPRI, FAO; press search; expert interviews

10.8.2 Primary processing

Women, who make up 90 percent of small-scale processors, lack access to reliable sources of electricity and the capital to buy efficient, modern processing equipment. This results in waste levels of 10–12 percent in processing as well as low-quality foods.

Women commercial processors may produce less due to limited working capital to run their operations. Banks demand high interest rates for working-capital loans and are not sensitised to the timing of agricultural operations.

10.8.3 Trade and transport

While women have a high participation rate in local transport, their involvement in wholesaling in regional markets is limited. One reason for this is inadequate transport infrastructure and social restrictions, which largely confine women to the role of buying and selling only small volumes of cassava in local markets.

10.9 Opportunities for women in cassava

Cassava offers three opportunities to empower women through access to higher and steadier revenues:

- **Increase the incomes of women smallholder farmers** by improving their productivity and establishing links with large-scale industrial processors;
- **Increase the incomes of women smallholder processors** by providing funding to purchase equipment and training to increase productivity and processing capacity; and
- **Develop large-scale, women-owned commercial-processing plants** that will produce high value-added industrial cassava products for local, regional and international markets.

Potential partners include the IITA and Nigeria's Federal Ministry of Agriculture and Rural Development.

Details on each of these opportunities are provided in the remainder of the section.

10.9.1 Increase the incomes of women smallholder farmers by improving their productivity and establishing links with large-scale industrial processors

Women account for 25 percent of smallholder cassava farmers in Nigeria, but plots managed by women produce 20–30 percent less per hectare than plots managed by men. Existing women's groups and cooperatives can help to close this productivity gap. The cooperatives could coordinate borrowing groups for women that would use the social connections within the group to reduce the likelihood of defaults. The funding could be used to buy fertilisers, higher-yielding cassava varieties and harvesting equipment. The women's cooperatives would also be responsible for ensuring that the women are trained in good agricultural practices, e.g., managing their plots and identifying diseases and pests. For example, the FAO recommends a range of sustainable, non-chemical measures to help cassava growers reduce their losses to diseases and pests without using herbicides.

Today, women smallholders are also more likely to sell their cassava in local markets where unpredictable demand and prices result in low, unstable incomes. If the women smallholder farmers produce high-quality, high-yielding tubers, they could be linked with large-scale industrial processors to guarantee stable prices. Industrial processors can link with women's cooperatives to create long-term contracts for feedstock and help fund the purchasing and planting of cassava varieties with higher starch content, e.g., TME 419 and NR8082. This would ensure a consistent supply of high-quality cassava feedstock for the processors.

10.9.2 Increase the incomes of women smallholder processors by providing funding and training

Nigerian cassava processing is done primarily by small-scale processors whose productivity is low because they use traditional methods and manual equipment. These enterprises process the cassava into garri (70 percent of all cassava production) and traditional food products such as *fufu*, *akpu* and *alubo*.

However, women smallholder processors often lack access to reliable sources of electricity and the capital to buy efficient, modern equipment. This results in high waste (an estimated 10–12 percent of cassava is lost in processing) and low quality foods, e.g., poor manual sieving leaves stones in garri and fetches a lower price. Manual processing increases labour costs but does not increase incomes. Women are typically constrained to selling to local markets, which have limited demand and are likely to command lower prices.

To improve women small-scale processor incomes, three parallel initiatives are required: fund the purchase of efficient processing equipment, provide training on how to operate this equipment, and expand the available markets beyond local markets.

Funding the purchase of simple but high-quality *garri*-processing equipment, including abrasion peelers, washers and roasters, would reduce the reliance on manual labour, thus reducing processing costs and increasing capacity. Today, many women processors who lack the funds to buy processing equipment lease it from men, further increasing their costs, and they are unable to pass on these additional costs to consumers in the competitive local markets. The use of processing equipment would also increase the quality of the *garri* and processed foods, allowing women to expand outside local markets.

Women need to know how to use the processing equipment. Training would give them more control over their businesses and enable them to train and employ other women to use millers, graters and flash dryers.

Lastly, linking the women processors to markets outside their local markets would allow them to increase capacity as they would not be dependent on local demand.

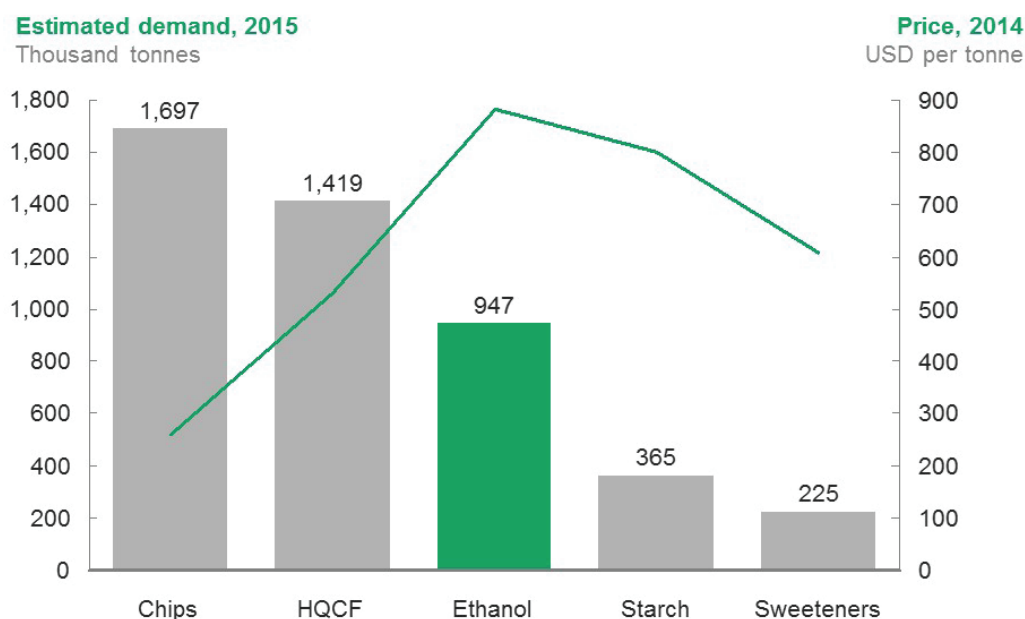
10.9.3 Develop large-scale, women-owned commercial-processing plants that will produce high value-added industrial cassava products

There are very few women commercial processors of cassava in Nigeria. Commercial processing is a capital-intensive activity and women are unlikely to have the funding, business training or technical know-how to run industrial plants. Additionally, commercial processors often lack the working capital to run their operations. Banks demand high interest rates for working-capital loans and are not sensitised to the timing of agricultural operations.

Women could run large industrial processing plants if they had the funding to buy land, processing equipment and financing for working capital. The entrepreneurs would also need technical and business training programmes and links to feedstock suppliers and markets for high-value cassava products. They would need to identify the end product they would produce based on projected demand, economic potential and their skill level, and build the business case to determine where they should invest and what the capital needs are. For example, cassava chips have the highest estimated demand, but ethanol commands the highest prices in the market (Exhibit 57). To increase regional trade, the large-scale processing plants could further explore other African countries as potential markets for high value-add industrial cassava products.

EXHIBIT 57

Ethanol commands the highest price per tonne of cassava industrial by-products



SOURCE: UNIDO; expert interviews



Case study: Cynthia Ndubuisi

In 2013, Nigeria produced 53 million tonnes of cassava, generating 12 million tonnes of peel. Farmers perceive the peel to be a useless by-product and usually burn it, but this releases harmful pollutants into the atmosphere (over 10 million tonnes of toxic carbon monoxide²⁶⁹).

Cynthia Ndubuisi, a Nigerian woman entrepreneur, developed a way to convert cassava peel into nutritious goat feed. In 2013, she founded Kadosh Production Company (KPC), which transforms the peel into marketable, low-cost products for livestock feed²⁷⁰. The technology dries, packages and sells the peel as a healthy goat-feed product called CASAFLAKES that is sold at USD 9 per 25 kilogram bag^{271, 272}.

KPC products provide economic benefit to both cassava farmers and goat keepers. It allows cassava farmers to utilise 100 percent of their crop to boost their income^{273, 274} and sells CASAFLAKES to livestock farmers at a much lower price than traditional feeds, allowing goat farmers to increase their income²⁷⁵. KPC also contributes to environmental protection by preventing the burning of cassava peel²⁷⁶.

11 CONCLUSION

Africa's increased integration into agricultural regional and global value chains is crucial for its continued transformation. A central element of this transformation is the economic empowerment of women through improved productivity and increased participation in commercial and higher value-add activities in agriculture.

- Agriculture accounts for around 25 percent of the continent's GDP²⁷⁷. However, productivity and yields in sub-Saharan Africa are amongst the lowest in the world²⁷⁸.
- Women make up almost half of the agricultural labour force in sub-Saharan Africa²⁷⁹. These women work primarily in smallholder production where they receive a significantly lower share of income than men in the same sector. Women work largely on family-owned land, with little or no remuneration. Moreover, women's land ownership rates are lower than those of men, they have limited access to financing and quality inputs, and they have limited access to financing, quality inputs and knowledge of agricultural practices.

This study identified five major constraints that can limit women's productivity and full inclusion into the agricultural economy: lack of access to assets, lack of access to financing, limited training, government policy, and time constraints.

Three cross-cutting themes emerge that could begin to address the specific constraints that women face in each focus country:

- **Increase the number of women entrepreneurs in large-scale agribusiness** by providing access to financing and training and improving access to regional and global markets;
- **Ensure women are remunerated by establishing them as co-owners** and improving productivity and training in core business skills; and
- **Increase access to niche markets** by producing and marketing products branded as coming from women-led value chains.

These themes offer a number of investment and advisory opportunities for AfDB:

- **Provide technical assistance** to women farmers through the Technical Assistance Trust Fund;
- **Provide financing** for women entrepreneurs; and
- **Establish market links** through the private sector.

In addition to the three direct opportunities for AfDB, AfDB could also play a role in addressing structural issues (e.g., land tenure and gender-neutral agricultural policy) through advocacy and engagement with governments.

To make the economic empowerment of women a reality, each of these opportunities must be translated into concrete initiatives. The objectives, impact and specific levers associated with each initiative should then be defined in detail and an implementation plan should be developed and then launched.

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13 EXPERTS WE INTERVIEWED

Cocoa

Nicole Apling-Kouassi; ANADER, Directrice Générale Adjointe

Yao Attoh Augustin; ANADER, Agricultural Engineer

Frédéric Yaha; ANADER, Head of Gender & Dev. Division

Amani Konan; ANADER, Head of M&E Division

Theodore Gounongbe; Bayer CropScience, Cocoa Food Chain Manager, West and Central Africa

Guy Liabra; Bayer CropScience, Development & Registration Manager

Kadi Sylla; Conseil du Café-Cacao, Coordinator of Gender Program

Edwige Hammond; Farm Invest, Shea Manager

Siriki Diomande; Farm Invest, Cocoa Manager

Laurent Pipitone; ICCO, Director of the Economics and Statistics Division

Len Garden; Independent, Consultant

Suzanne Kabbani; Maître de chocolat entrepreneur, owner of Douceurs de Suzanne and founder of La Maison du Chocolat Ivoirien

Inge Jacobs; Mars, Gender Focalpoint

Daniel Berman; McKinsey & Company, Consultant

Marcel Goore Bi; Ministry of Agriculture, Director of Cash Crops

Mireille Kramo; Ministry of Agriculture, Deputy Director of Perennial Crops

Mathieu Faujas; TechnoServe, Deputy Country Director and Head of Regional Cocoa Programs

Daouda Dao; Université Felix Houphouet Boigny, Centre Suisse de Recherches Scientifiques, Professor and CSRS Director

Dr. Christophe Kouame; World Agroforestry Centre, Country Director

Dr. Jane Kahia; World Agroforestry Centre, Plant Biotechnologist

Chris Tullis; World Bank, Field Coordinator for Gender Innovation Lab

SOCOB Cooperative, Abidjan

Coffee

Charles Gautier; Nestlé, Coffee Procurement

Orlando Garcia; Nestlé, Director of Nescafé Brazil

Farah Salim; IIWCA, Executive Leader

Ben Aschenaki; Ethiopian Commodity Exchange, Executive Strategy Officer (formerly)

Linda Butler; Nescafé Plan, Plan Manager

Emebet Tafesse; Zebad (coffee exporter), Managing Director

Emebet Tafesse; Enat Bank, Director, Credit Management

Lelise Temesgen; Moyee Coffee (commercial farm, roaster, exporter), Managing Director (and former COO of ECX)

Ahadu Woubshet/Heleanna Georgalis; Moblaco Coffee (roaster/exporter), Owner/CEO

Gyde Feddersen; Hanns R. Neumann Foundation, Gender Specialist

Jorge Tiemeier; Hanns R. Neumann Foundation, Member of Management, Germany

Vanessa Adams; ACDI/VOCA, Director—Ag Project

Mengesha Tadesse; ACDI/VOCA, Policy Team Leader—Ag Project

Rahel Tessema; ACDI/VOCA, Gender Specialist—Ag Project

Henok Minas; ACDI/VOCA, National Project Coordinator

Solomon Legesse; ACDI/VOCA, Cooperative Development Team Leader—Ag Project

Mefthe Tadesse; TechnoServe, Country Director

Dareselam Bereda; TechnoServe, Coffee and Maize Project Coordinator

Frederick Kawuma; InterAfrican Coffee Organisation, Secretary General

Cotton

Saskia Hedrich; McKinsey & Company, Senior Knowledge Expert

Sarah Götz; COMPACI, GIZ, Project Manager

Roger Peltzer; DEG, Director

José Sette; ICAC, Executive Director

Salome Nakazwe; WfC, Officer

Boureima Sanon; COMPACI, Agriculture Advisor

Oumar Kossougdou; COMPACI, Agriculture Advisor

Louis Ye; SOCOMA, Production Director

Abel Gouba; Helvetas, Manager

Hélène Traore; SOFITEX, Delegate in Ouagadougou

Bibiane Ouedraogo; Ministry of Gender, Minister

François Lompo; Ministry of Agriculture, Minister

Emilienne Guire; Faso Coton, Head of Extension Services

M. Conate; Faso Coton, Head of the Factory

Karim Traore; UNPCB, President

Cassava

Alfred Dixon; IITA, cassava expert

Dr. Chuma Ezedinma; UNIDO, Head of Agribusiness

Dr. Daouda Dao; CSRS, Directeur Adjoint

Liane Ong; McKinsey & Company, Global Chemicals & Agriculture

Janet Oyelami; None, Gari Processor

Bayo Sango; Shonga Farms, Manager

Nike Tinubu; Eagleson Farms, Agribusiness Entrepreneur

Rajavelu Rajasekar; Allied Atlantic Factory, Industrial Processor

Ayo Olubori; Cassava Grower Association, President

Adetunji Oluwatoyin; Federal Ministry of Ag. and Rural Devp., Technical Advisor

Ayeni Olusegun; Federal Ministry of Ag. and Rural Devp., Assistant Director

Atsuko Toda; IFAD, Country Manager

Kayode Faleti; USAID Markets, Cassava Officer

14 GLOSSARY OF TERMS

AfDB: African Development Bank

ATA: Agricultural Transformation Agency

COMESA: Common Market for Eastern and Southern Africa

CVC: Cocoa Village Clinic

DRC: Democratic Republic of the Congo

ECOWAS: Economic Community of West African States

ECX: Ethiopian Commodity Exchange

FAO: Food and Agriculture Organization of the United Nations

GDP: Gross domestic product

GPC: Groupement Producteurs de Coton (Cotton Producer Groups)

HQCF: High-quality cassava flavour

IFPRI: The International Food Policy Research Institute

IITA: International Institute of Tropical Agriculture

ILO: International Labour Organization

OSAN: AfDB's Agriculture and Agroindustry Department

SCPZ: Staple crop processing zone

UNICEF: United Nations Children's Fund

ACDI/VOCA: Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance

15 FOOTNOTES

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COMMENTARY ON THIS REPORT

“I strongly recommend this publication because it highlights the importance of capacity building and empowerment”

In cassava production for example, women make up a significant population of the workforce, but they earn very little due to the neglect of women in the sector.

If women make up about 50 percent of the agricultural labour force, promoting and supporting them would have a huge and desirable impact on food security in Africa.

I strongly recommend this publication because it highlights the importance of capacity building and empowerment as part of the solution to improving the livelihoods of African women in agriculture. This can have an enormous impact on their households—and a positive “domino” effect on future generations.

With good innovations and policies in place, a majority of these women would shift from being unskilled to skilled in production value chains, where women have begun to play significant roles alongside their male counterparts. Building gender-sensitive agriculture systems is the kind of change needed in the eradication of poverty in Africa.

Nike Tinubu

Eagleson Farms, Agribusiness Entrepreneur (cassava), Nigeria

“Agriculture indeed has a bright future if women are enabled to intensively participate”

A key message of the study is that African agriculture has indeed a bright future if women are enabled to intensively participate. The study’s specific strength is in showing the huge economic potential which African smallholder farmers can explore in the years to come through a strong participation of women in different steps along the supply chain. It is based upon a thorough assessment of the situation and participation of women in four key supply chains in Africa. The study fully reflects the reality that we encounter through our work with coffee farmer communities. It will certainly contribute to the discussion among stakeholders, help design concrete action and serve as an excellent reference within a continuous learning process.

Jorge Tiemeier

Hanns R. Neumann Stiftung, Member of Management, Germany