

Policy Dialogue

The role of governments in developing agriculture value chains

2019



Case study
1

**Cashew value-chain
development**

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Acknowledgements

This publication was prepared by the Collaborative Africa Budget Reform Initiative.

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This publication was funded by the African Development Bank. The findings and conclusions do not necessarily reflect their positions or policies.



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Acronyms and abbreviations

ACA	African Cashew Alliance
ACI	African Cashew Initiative
BMGF	Bill and Melinda Gates Foundation
CAADP	Comprehensive Africa Agriculture Development Programme
CSO	civil society organisation
NGO	non-governmental organisation
PFM	public financial management
PPP	public-private partnership
RCN	raw cashew nuts
VCA	value-chain approach
VC	value chain
VCD	value-chain development



Africa has abundant arable land and labour which with sound policies could be translated into increased production, incomes and food security. This has not materialized because of lack of consistent policies and/or effective implementation strategies.

(Memfi 2015: 71)



1 Background



Objective of the dialogue. This case study has been prepared for the CABRI Dialogue on Value for Money in Agricultural Spending. The dialogue focuses on the implications for public financial management (PFM) of adopting a value-chain approach (VCA). The objective is to bring together officials from ministries of finance and agriculture to exchange experiences in terms of the policy considerations and institutional challenges of promoting VCs. This case study considers public support for the cashew VC. A second case study assesses the rice and cassava VC in Nigeria, while a third reviews the broader implications of taking a VCA.

Importance of agriculture. Agriculture provides the majority of employment in most African countries, and is often given a high priority in development strategies. Most models of development expect growth in other sectors to be faster than in agriculture, but growth in agricultural productivity in Africa has been disappointing and below that of other regions. The reasons for this include small farms, limited input and crop markets and difficult soils and weather, exacerbated by climate change.

Role of government. The role of government in African agriculture is complex. Research, extension and information services, quality control and public infrastructure are managed mainly by the government. In many countries, there is little private sector engagement in agriculture, and the government fills gaps in input supply, crop marketing and financial services. Providing this support while also creating space for the private sector to enter the market is a challenging task for policy-makers.

Most African countries have signed the Comprehensive Africa Agriculture Development Programme (CAADP), which provides a common framework for agricultural transformation. There are, however, constraints in budget allocation and challenges in executing the budget allocations that have been agreed upon, because of a lack of revenue, capacity constraints and issues of co-ordination amongst funders. These challenges are often severe in agriculture because of issues of seasonality and uncertainty and the large number of small-scale market actors, including farmers.

Value-chain approach (VCA). The importance of taking an integrated approach to agriculture has been recognised for over 50 years. Using a VCA has become increasingly popular in recent decades. A VCA builds on experience with integrated

approaches and adds a specific focus on the profitability of all actors in the chain and the need to respond dynamically to changes in the market. One popular interpretation of a VCA is the 'Making Markets Work for the Poor' (M4P) approach.

Advantages of a VCA. A VCA takes a comprehensive view of the whole chain, and ensures that any blockages in it are resolved and do not limit growth. It reviews the full range of policy and investment needed and the prioritisation of each intervention. The requirement to assess incentives involves methods that are similar to those used by the private sector and, hence, builds partnerships.

Challenges of a VCA. Using a VCA involves a range of policies and investments that need to be carefully prioritised and sequenced. It requires collaboration amongst several public institutions and with the private sector. Parastatal institutions may also be involved. These institutions often have overlapping interests and are reluctant to relinquish responsibilities. While the analysis used in a VCA diagnosis bridges the public and private sectors, the objectives, decision-making and language of the public and private sectors are different and also need to be bridged. A VCA is often applied to specific crops, and governments, therefore, must take great care in selecting successful crops.

Objective of the cashew study. The objective of this case study is to understand the challenges in designing and co-ordinating policy that addresses all parts of the cashew VC. The study focuses on cashew nuts, but the lessons are expected to be relevant for other export crops.

2

Cashew production in Africa



A VCA to agriculture starts with an understanding of demand. Global demand for cashews grew strongly from 0.6 million tons in 1985 to over 4 million tons in 2008, with an average annual growth rate of 9 per cent. The strongest growth in production was observed in Africa and Asia, with Vietnam performing particularly well and becoming the world's largest producer in 2003. Since 2008, global production has been variable, fluctuating between 3.5million and 4.5 million tons

Figure 1 shows cashew production in African countries since 1961. It shows that the early leaders in cashew production were Mozambique and Tanzania, but that production declined in these countries in the 1980s and 1990s, before recovering. There was a dramatic rise in production in Nigeria between 1998 and 2008, followed by an even more dramatic collapse.¹ Côte d'Ivoire has performed strongly since 2003 and currently produces about four times more than any other

country. There has also been steady growth over the past two decades in Guinea Bissau, Benin, Ghana and Burkina Faso. These eight countries produced 92 per cent of the total African crop in 2017.

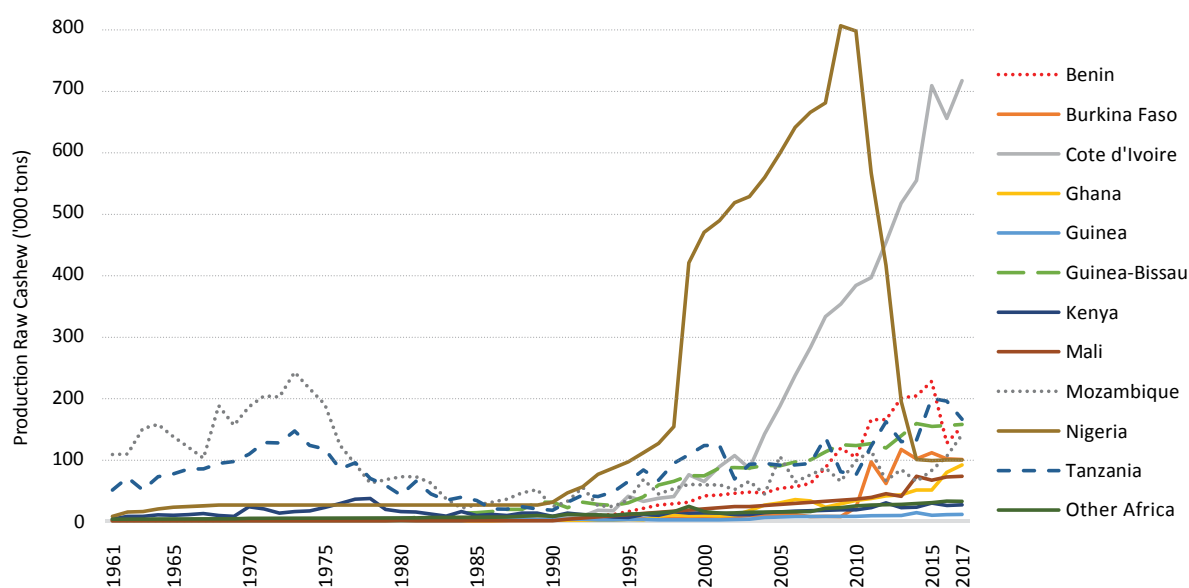
Relative importance of cashews. Table 1 shows the relative importance of cashews for the main African producers. The crop is exceptionally important in Guinea Bissau, where production in tons is only slightly less than that of the main staple food (rice) and roughly equivalent to all other agricultural products combined. It has also become very important in Côte d'Ivoire and Benin during the past 15 years. Expressed as cashew production per capita annually, Guinea-Bissau is much higher than other countries (at 30 kg/person), with Côte d'Ivoire at 10 kg/person, Benin at 4 to 8 kg/person and all other countries at less than 2 kg/person, according to FAOSTAT figures.



Global demand for cashews grew strongly from 0.6 million tons in 1985 to over 4 million tons in 2008, with an average annual growth rate of 9 per cent.

¹ There may be some issues relating to changes in measurement in the FAOSTAT data for Nigeria.

Figure 1: Production of raw cashews in Africa



Source: FAOSTAT (accessed February 2019)

Table 1: Features of cashew production in African countries

Origin	Yield per hectare (kg)	Pests, diseases	Tree age	No of growers	Importance to the economy*
Guinea Bissau	550	–	10	1,000,000	1
The Gambia	500	Insects	< 8	10,000	10
Benin	300–500	Insects	< 10	120,000–180,000	3
Ghana	400	Anthraxnose, insects	< 8	35,000	10
Burkina Faso	400	Insects, drought	< 15	25,000	5
Tanzania	250–450	Powdery mildew, helopeltis	> 15	250,000	5
Senegal	350	Insects	> 13	50,000–60,000	8
Ivory Coast	250–600	Insects, fire	< 10	300,000	5
Kenya	300	Powdery mildew, insects	> 15	60,000	10
Mozambique	200	Powdery mildew, insects	> 30	100,000	5

Source: World Bank (2018)

Note: *For the numbers in column 6, 1 = high and 10 = low

3 The cashew value chain

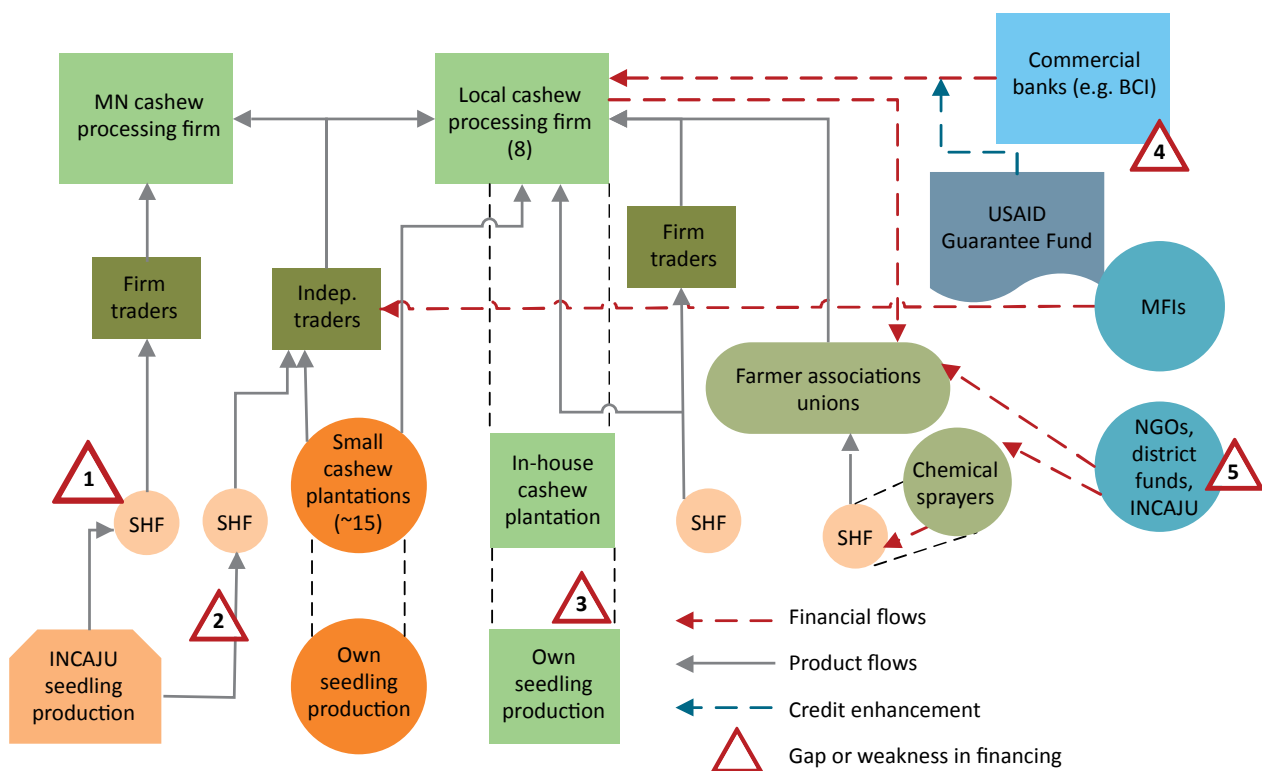


3.1 Value-chain map

The starting point for most VCAs is a map showing the various actors in the VC. For cashews, these actors include

input suppliers, farmers, co-operatives, traders, storage providers, processors and exporters. There may also be specialised institutions, such as those involved in providing financial services. Figure 2 presents an example of a cashew VC map.

Figure 2: Cashew value-chain map in Mozambique



Source: MEDA (2011)

Note: BCI = Banco Comercial e de Investimentos; INCAJU = Mozambique's National Cashew Institute; MFI = microfinance institution; MN = Mozambican; SHF = smallholder farmer

3.2 Profitability and returns to capital

Having established a VC map, the value added for all actors in the chain is considered. Value added is composed of returns to labour and to capital, and both are relevant for value-chain development (VCD).

Returns to capital. Assessing returns to capital ensures that all actors in the VC are viable and have incentives to continue to participate in the VC. A review of competitiveness in the cashew VC in Africa reached the following conclusions

- The international cashew market is volatile, with rising demand but constraints and variations in supply. Prices are rising over time but are also subject to sharp falls and rises. The raw cashew market is controlled by a few actors who make high margins but also take high risks.
- Current cashew market conditions in Africa provide a positive environment and there are no major barriers (in, for example, quality, seasonality, tariffs and demand). Raw cashews from Africa are competitive in international markets and provide good returns to farmers. There are, however, opportunities to improve productivity and quality.
- The international markets for raw (in-shell) and shelled (kernel) cashews are linked but not integrated, leaving

African countries with theoretical options to market shelled cashews without affecting their export of raw nuts. However, investment in processing is difficult to obtain, because of both the technical challenges and the general economic and business environment. Consequently, most cashew exports will continue to be of raw nuts, in the short term.

- Although domestic markets for kernels are small in Africa, they offer local processors an additional source of income, which spreads risk and gives them more options in negotiating sales. There are also good opportunities to diversify income by using the cashew apple.

Table 2 shows an example of an assessment of returns to capital undertaken as part of the appraisal of the 'Cashew Value Chain Competitiveness Project' that is about to start in Côte d'Ivoire. The analysis shows that the three main actors in the chain (viz. farm, warehouse and processing) all obtain strong returns on investment of more than 20 per cent. The trading and transporting functions are not assessed separately, and are included in warehouse and processing costs. In addition to the processing, there are also 'cashew service hubs', which are publicly owned and provide support for input supply and farm purchasing in areas that do not have private trading options. The service hubs have a lower rate of return (12 per cent), which reflects the fact that the prices charged are expected to be set at a level that is not seeking to maximise profits.

Table 2: Example of enterprise profitability analysis

Farm/enterprise models	IRR (%)	NPV (US\$ 000s)
Farm/production level		
<i>3 ha orchards (CFAF 700/kg farm gate)</i>	40.89	1.37
Storage/warehouse level		
<i>Small-scale unit (500 t), rehabilitation</i>	26.30	21
<i>Medium-scale unit (2,000 t), new construction</i>	41.43	373
Processing/industrial level		
<i>Small-scale processing unit (3,000 t)</i>	20.79	1319
<i>Medium-scale processing unit (5,000 t)</i>	25.61	1995
<i>Large-scale processing unit (10,000 t)</i>	26.87	4,39
<i>CNSL extraction and refining unit</i>	39.26	1766
<i>Cashew service hub</i>	12.25	146

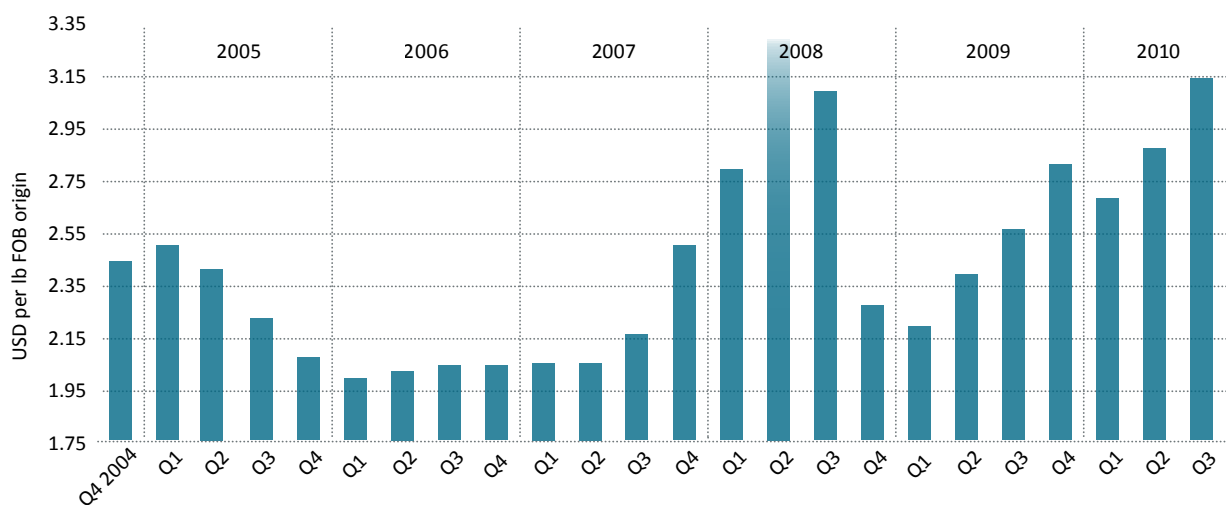
Source: World Bank (2018)

Note: CFAF = CFA franc; CNSL = cashew nut shell liquid; IRR = internal rate of return; NPV = net present value; RCNs = raw cashew nuts

Rates of return for the actors in the VC depend on the farm-gate and ex-warehouse prices, and the efficiency of the market will determine whether the prices are set at levels giving returns that are spread roughly evenly amongst the actors. Concentration of purchasing power at any level tends to shift prices up or down and affect the rate of return for each actor. In practice, prices will be constantly shifting, depending on the season and on international prices, and a good market analysis should accommodate the dynamic nature of prices and the way in which they respond to uncertainty about the future. In practice, very few VCA diagnostics for cashews contain even a comprehensive

assessment of value added through the whole VC, and not many include an assessment of the dynamic behaviour of market prices through the whole VC. There are no published prices for raw cashew nuts because the trade takes place amongst private enterprises and the data are commercially sensitive. Figure 3 presents the average quarterly price of cashew kernels from 2005 to 2010, and shows the volatility between and within years. The spike in prices in 2008 was caused by concerns over the Brazilian and Vietnamese crops. In addition to change over time, there are also trends in the price difference between grades, with a tendency for the price differential between qualities to increase.

Figure 3: World cashew prices (WW320 grade)



Source: ISS database presented in Fitzpatrick (2011)

Comparing international prices is difficult because of issues relating to exchange rates and the very small market base for kernels in most African countries. FAOSTAT figures for cashew kernel prices suggest that processors in Asian countries receive much higher prices than do their African counterparts. The average price in African countries between 2000 and 2017 was USD372/ton, compared with USD487/ton in Indonesia and USD830/ton in Vietnam. The lower prices in Africa may reflect higher costs of processing and exporting from Africa but they are also likely to be affected by policies in Asia of managing exchange rates to make exports more profitable. The FAOSTAT data suggest that prices in Asia follow similar patterns, but African prices seem to be unaffected by changes in Asian prices.

Employment and returns to labour. Analysis of employment and returns to labour provides valuable evidence of the level of incentives for all actors to participate in the VC in a sustained manner. It also provides an indication of the current and potential contribution of cashews to economic benefits and to the growth of GDP more widely. The evaluation of the ACI (see Box 3) suggested that cashew processing promoted by the programme led to 414 000 farmers (about a quarter of all cashew farmers in Africa) being trained and receiving improved annual incomes that averaged USD161 per farmer,

resulting in annual farm benefits of USD67 million. ACI also succeeded in creating 5 800 new jobs in processing, with combined annual earnings of USD6 million. The combined improvement in earnings was, therefore, USD73 million. This is an increase of about 1 per cent on the total cashew production in Africa of about 1.5 million tons, worth very roughly USD7 500 million, a significant contribution to the total growth rate in cashew production in Africa, which averaged about 7 per cent over the period 2000–2010.

Wider benefits. A good analysis of value added considers its dynamic nature and the factors that may determine how it changes over time, which can include economic, social, environmental and political factors. Some of these may be captured through sensitivity analysis, which considers how value added is affected by possible changes in the assumptions relating to these factors. Annex 1 is an example of the various transmission channels by which value added benefits are achieved.

There have been several assessments of the wider poverty and social impact of cashew VCD (see Bromley 2011; GIZ 2017). The transmission channels may be viewed either as factors that influence value added or as intermediary benefits in themselves, in which case they can be treated as one of a

number of criteria to be assessed through a form of multi-criteria analysis (MCA). A further elaboration of this approach is to consider the likely implications of each of the factors or criteria for specific target groups, as illustrated in Table 3, which considers the impact of each factor on the main actors involved in the VC.

A review of the multiplier effects of cashew production estimated that processors added USD2.1 to every USD1 of raw cashew farm-gate sales, with 93 per cent of that incurred in the processing factory (Bromley 2011). The review took

this one step further and estimated that the multiplier effects of the labour incomes in processing would add \$1.43 of total household incomes for every \$1 of raw cashew farm-gate sales. However, there is a longstanding practice in applied economic analysis that multiplier effects should not be taken into account. This is not because the multiplier effects are not important, but because of the challenges in ensuring consistency in the approach to estimating multiplier effects and the risks that they will be exaggerated for some products if simplistic methods are used.

Table 3: Wider impact of cashew VCD in Ghana

Stakeholders	Outcomes in terms of capabilities										Quality of information		
	Economic (+/-)		Human (+/-)		Political (+/-)		Socio-cultural (+/-)		Protective security (+/-)				
	short term	medium term	short term	medium term	short term	medium term	short term	medium term	short term	medium term			
Main Target Groups													
Extremely poor cashew farmers	0	0+ Prices	0	0	0	0	0	0	- ? Marginalisation	0	0	poor	
Poor cashew farmers	0	+ ? Prices	0	+ ? Knowledge good agr. practices	0	0	0	0	+ ? (If coop. were promoted)	0+	+ ?	moderate	
Better-off – smallscale to medium cashew farmers	0	++ Income productivity Prices	0	+ Knowledge good agr. practices	0	0	0	0	+ Cooperatives/ bargaining power Access to info	0	+	Better distribution of income over the year	satisfactory
Commercial and rich cashew farmers	0	++ Income productivity Prices	0+	+ Knowledge good agr. practices	0	0	0	0	+ Cooperatives/ bargaining power Access to info	0	+	Better distribution of income over the year	satisfactory
Poor farmers in Brong-Ahafo (no cashew) working as hired labour	0+	+ Seasonal employment	0	0	0	0	0	0	0	0	0+	some use	
Seasonal migrants	0+	+ Seasonal employment	0	0	0	0	0	0	0	0	0	some use	
Employees in the processing companies (mainly women)	+	++ Employment	0	0+	0	0	0	0	0	0	+	Health insurance	good
Women in cashew producing households	0	+ Family income	0	- Workload	0	0	0	0	- ? Reduced access to land?	0+	+	Better distribution of income over the year	poor
Female-headed households (rural: with cashew? urban: as employees in processing?)	0	+ ?	0	0	0	0	0+	0+	- ? Reduced access to land?	0+	0+	poor	

Stakeholders	Outcomes in terms of capabilities										Quality of information
	Economic (+/-)		Human (+/-)		Political (+/-)		Socio-cultural (+/-)		Protective security (+/-)		
	short term	medium term	short term	medium term	short term	medium term	short term	medium term	short term	medium term	
Main Target Groups											
Children (15 years old)	0	0	-	+	0	0	0	0	0	0	some use
Chiefs (with cashew?)	0	+?	0	0+	0	0	0+	0+	0+	0+	good
Municipal/district Assemblies	0+	+	0	0	0	0	0	?	0+	0+	good
Processing companies	0	++	+	+	0	0	0	++ Nat. & int. Net-works	0	?	adequate
Traders and agents	0	0+	0	0	0	0	0	?	0	0	good
Exporters	+	++	0	0	0	0	0	0	0	0	good
MOFA-Cashew Development Project & District Agricultural Development Units	0+	0+	0+	0+	0	0	0+	+?	0+	0+	excellent
Non-Governmental Organisations	0+	0+	0+	0+	0	0	0+	+?	0+	0+	good
Implementing partners	0+	++	0+	0+	0	0	0+	++	0	0	excellent

4

Actors and policies in the cashew value chain



4.1 Cashew production

Most cashew production in Africa is undertaken by smallholders with individual trees standing amongst annual crops. This makes it difficult to compare yields with those achieved in plantations devoted exclusively to cashew. However, African yields are only 250 to 600 kg/ha (see Table 1), compared with about 1 000 kg/ha in Asia (Rogers, Cook & Agyepong 2015). This reflects the age of some trees and the extensive approach to cultivation adopted by smallholders who manage their cashew trees as one of several crops that are integrated into a mixed farming system. About two million smallholders are involved in cashew production in Africa and nearly three-quarters of them are poor.

Research and extension. The public extension service is normally the frontline contact for farmers. The extension service focuses on husbandry issues, including tree rehabilitation and replacement, pest control and post-harvest care. For example, an ACI yield survey suggested that good cultivation practices and high-quality planting material provided by the Cashew Development Programme in Ghana increased yields to 800 kg/ha (Rogers et al. 2015), from an average of 400 (see Table 1). However, extension is often less effective in supporting farmers with marketing.

The programming and management of research and extension is usually straightforward, and may be provided either fully integrated into the agricultural research and extension services or with a specialist cashew institute (e.g. in Côte d'Ivoire, Mozambique and Tanzania) providing research, planting materials and specialist advisers available either directly to farmers or through extension networks, such as farmer field schools and extension officers. Cashew research and extension is clearly a critical element of overall cashew VCD and the success of research and extension will depend on whether the whole VC is healthy. It is, therefore, desirable to complement research and extension with prioritised support for other parts of the VC. However, given the challenges associated with the complexity of managing a comprehensive VCD programme across the whole cashew VC, there are good reasons to allow some elements of support to be delivered through the routine agricultural budget, beyond a programme dedicated to a single VC. The

area of research and extension is one in which it may be possible to fund cashew extension through the routine budget, rather through a dedicated VCD programme, even though the activities of both depend on each other and can be co-ordinated.

Contract farming. Outgrower schemes (also known as contract farming) are receiving renewed interest as a means to engage smallholders with national, regional and global markets (see the example in Box 1). While the history of such schemes in Africa is mixed, there are some major potential benefits, including pre-financing and credit, access to markets and investment in productivity. There are, however, some challenges, including, in particular, the risk of farmers getting locked into contracts with wholesalers that reduce choice and leave them vulnerable to exploitation in terms of prices and other contractual conditions (Lamb 2011). In the last ten years there has been growing interest in understanding the conditions required for successful contract farming, following some perceived success associated with fair trade and the concerns of large agri-businesses to improve the reliability of their supply chains, especially in the context of climate change risks, and for crops in respect of which smallholder production has the potential to deliver higher quality products. One report suggests that there are three preconditions for successful contract farming: farmers need some form of collective representation to negotiate with companies; companies need to be transparent about their methods and motivation; and a third party needs to be involved to facilitate continuing agreement (François & Lefilleur 2016).

Box 1: Contract farming for cashews in Tanzania

In Tanzania, the transnational corporation OLAM has used contract farming to improve the reliability of its cashew supply chain. This has included support for improving the quality of products supplied by farmers and investment in first stage processing close to farmers. OLAM has also invested in upgrading local communities and is motivated in doing this primarily by the impact it has on the sustainability of the supply chain, rather than from concerns of 'corporate social responsibility'.

To strengthen the commitment to contract farmers, OLAM launched a 'Livelihood Charter' in 2011, with eight principles: pre-finance, training/inputs, labour practices, market access, quality, traceability, social investment (including health, education and infrastructure) and environment. The principles defined in the charter reflect the guidance in the 'Business Code of Conduct of the African Cashew Processing Industry' established by the African Cashew Alliance.

Source: Will (2011)

Smallholder associations. In theory, farmer associations are a useful way of sharing knowledge and improving negotiating power, with input suppliers and crop purchasers. Experience in Africa suggests that it is challenging for producer associations to remain sustainable in practice. For example, in the Angoche district of Mozambique, a project supported by Sofreco with French funding, established a large plantation and formed farmer associations (MEDA 2011), but there were problems with management and land ownership, and the associations became dormant within a few years of the end of the project.

Rural infrastructure. In most countries, rural roads, irrigation and drainage account for the bulk of expenditure on rural infrastructure. These are typically long-term investments and, as they would normally serve many commodities, it would normally be best for them to be guided by the potential benefit for all rural VCs, without a special focus on the cashew VC. Nevertheless, some VCD projects do have funds for rural infrastructure that are used mainly for rural roads, where there are significant localised constraints to transport between major producing and processing locations.

There may also be some investments in market structures. These usually involve relatively small expenditure and are critically dependent on other policies related to market development, as described below.

4.2 Processing and marketing

The proportion of crop that is processed nationally is significantly higher in East Africa (Kenya 10 per cent, Tanzania 27 per cent, Mozambique 28 per cent) than in West Africa (generally 98 per cent raw, with the exception of Ghana) (Fitzpatrick 2011). However, in the past five years, total processing in West Africa has grown steadily, while processing in East Africa dropped in 2014, and West Africa processed significantly more than East Africa between 2014 and 2016.

Processing and trading by farmer associations. There is a varied history of involvement in small-scale cashew processing by farmer associations. However, the sustainability of associations that engage in marketing is challenging as they

have limited financial capacity, are buying and selling in volatile markets, and have to compete with commercial organisations that have much better access to financial services and are more closely linked with international markets.

In Tanzania, the Masai High Quality Farmers' Products Ltd is an organisation owned by member village associations, which provides extension through farmer field schools and which owns a processing factory, as well as providing organic certification. Kitama is another producer-owned processing facility, developed with support from the United Nations Industrial Development Organisation. Although Kitama had 250 members in 2010, it was unclear at the launch whether it had the capacity to manage even the pre-processing activities it was initially designed for (Will 2011). In Benin, farmers have attempted to create cashew-growers' organisations (CGOs) to increase supply and obtain improved prices. In one major producing region in 2009, nearly 20 per cent of supply was marketed through such groups and achieved significantly higher prices (Tandjiekpon 2010). In Benin, there is also a network of CGO collaboration institutions, including regional and communal unions, that help with input supplies and networking and lobbying related to extension, policy and quality.

Micro-processing companies. Micro-processing in Africa is usually an artisanal activity with each facility having an annual capacity of less than about 500 tons, although many are much smaller. The viability of micro-processing appears to be fragile, but it is difficult to assess in a rigorous manner because its potential to succeed is determined not just by operational efficiency, but also by the ability of micro-processing firms to participate in buying raw cashews and in selling kernels, in competition with larger enterprises. The experience in Mozambique illustrates both the need for flexibility and the challenges facing micro-processing (See Box 2). In Côte d'Ivoire, several co-operatives are involved in micro-processing. Their main constraint is said to be with the supply of raw cashews, especially because there are no financial resources for purchasing prior to processing and sale (Kone 2010).

Associations of processors may assist in lobbying and networking. They may also collaborate in market operations, to improve bargaining power, but this can be a risky activity and needs to be embarked upon with care and without exposing other related institutions to risk if the operation encounters financial challenges.

Larger processing companies. On a larger scale, processing cashew nuts is a competitive business. Experience in East Africa over several decades demonstrates how challenging it is to provide public support for larger-scale processing in a sustainable manner. The challenges relate partly to the operation and management of processing facilities, but are affected even more by public engagement in processing and trading.

Box 2: Cashew processing in Mozambique

Mozambique used to be the global leader in cashew production and processing until the 1980s, when a combination of policy, civil war and competition from Brazil and India led to the collapse of cashew production, including both raw and processed nuts. The ineffective policies included price controls and a ban on exporting raw nuts. At the end of the civil war, in 1992, the new government introduced some liberalisation and privatised the cashew processing factories. However, a relatively high export tax on raw nuts was retained as an incentive for domestic processing. Some further liberalisation then took place through the 1990s, but processing remained very low. In the 2000s, the National Cashew Institute (INCAJU), with support from USAID, provided an initial loan and technical support to one small business. This model was used for support to 11 further cashew processing businesses, which by 2008, were employing 3 000 people and processing nearly 50 000 tons of raw cashews.

In another initiative, the ADPP project and the IKURU co-operative received funding and technical support to install 10 micro-processing factories, each with a capacity of 50 tons (MEDA 2011). Although the factories were successful, they struggled with marketing and joined together in the Ozivacaju company, in which the processors held 49 per cent of the shares and a combination of ADPP, AMODER 51 per cent, with IKURU providing some working capital. This arrangement was also unsuccessful, as the new company lacked working capital for purchasing raw nuts. An alternative approach was then found, with the micro-processing units providing a processing service for a large processing factory.

Many companies are involved in processing several different crops in order to spread the risk (MEDA 2011). Some have vertical international linkages, which assists with market development. A few companies have invested in cashew plantations, although this is not common. One processor attempted to develop an outgrowing operation but this was not sustained. Several processors have contracts with farming associations, which include the provision of working capital under a contract farming system. Securing a supply of raw cashews is a major challenge for processors, and most employ their own buying agents as well as buying from independent traders. All companies were interested in improving their supply chain and building improved relationships with producers. Some processors reported that they were planning to leave the cashew processing market until conditions improved, which was probably a reference to the government's policies relating to the export of raw cashews.

Source: Webber & Labaste (2010); MEDA (2011)

Exporters. In most countries, purchase for export is done by companies that are either involved in processing in Asia, or have strong links to the Asian processing companies (MEDA 2011; Tessmann 2017). A few nationally owned exporting companies do exist, but there is no formal international market for raw cashews, which makes it difficult for nationally based traders to negotiate export contracts for raw cashews, without establishing close relationships with the big international processing companies (Bila et al. 2010). The concentration of activities amongst relatively few exporters has implications for the transparency of the domestic trade in cashews, since many buyers operate as agents for exporters. International prices for cashew kernels do provide some guide as to the likely prices being paid by international processing companies for raw cashews, but, given the fairly large short-term fluctuations in prices, it is difficult for companies based in Africa to understand the negotiating positions of international buyers.

Quality control. Public support for product quality is often included in farm research and extension programmes, including production quality and standards for post-harvest storage, especially on farms. A VCA can take this support a step further and ensure that the benefits of high-quality produce are reflected in prices through the supply chain, including through grading and certification systems, and by ensuring that prices throughout the chain fully reflect the premium that consumers are willing to pay. Fair trade, traceability and organic markets are still relatively small, but there are opportunities for smallholders to benefit from them more than would larger-scale producers.

Information services. The provision of market information services is critical to a VCA, and the success of VCD is highly sensitive to such services being made available in a timely way, as a precondition for other market development policies. These services include simple approaches to the provision of market information (e.g. on prices and volumes traded in different locations) and also more complex programmes that

aim to facilitate market link-ups and more efficient agreements between farmers and traders/processors. Since one of the lessons from the ACI evaluation is that complexity adds significant costs and risks to a VCD programme, it would seem wise to allow other more specialised information and policy programmes (e.g. on weather forecasting or early warning systems) to be pursued without formally being covered by an integrated VCD programme.

Market regulation and tax incentives. Cashew prices are relatively volatile, affected by the seasonality of supply, the influence of pests and other production constraints and events in regional and international markets. Market regulation also provides important policy options for creating incentives to promote local processing. The following are the main types of market regulation and incentives that affect the cashew VC.²

- A few countries attempt to enforce fixed prices, but this is difficult to achieve because exporters have to compete on international markets and production can collapse if exporters make insufficient margins. Some governments have published guide prices but without requiring traders to follow these prices (e.g. in Tanzania and Guinea-Bissau).
- Direct controls on prices most often involve price floors, to protect farmers from being forced to sell during periods of low prices, often just after harvest (e.g. in Benin). But such price floors are difficult to enforce without direct public procurement.
- Many countries apply export tariffs as a revenue-raising measure. Some apply the tax to raw cashews to promote domestic processing (e.g. Tanzania). In other countries, processed cashew kernels are exempt from a general export tax to promote processing (e.g. Mozambique). Levies (i.e. fees that are retained for a specific purpose, usually related to cashew VCD) have also been used in some countries (e.g. Côte d'Ivoire).
- A few countries have imposed a ban on raw cashew exports to promote local processing. A total ban was tried in Kenya and is often reported as having failed and caused a decline in cashew production. In Mozambique, there was a ban for several months after harvest, which was less disruptive but had limited impact because processors were not required to buy during the ban period. Mozambique also requires exporters to offer at least 20 per cent of their crop to local processors but does not specify the prices at which the crop should be sold. In Guinea-Bissau, exports by road were banned, to ensure that Guinea-Bissau benefitted from export tariffs.
- Several countries have used tax incentives to enable processors to import processing equipment without import duties. It is not clear whether this is as part of a general scheme covering all manufacturing equipment or

whether it is specific to selected activities, including cashew processing.

Support for market development. Support for market development may take a range of forms.

- In theory, market research and export promotion should be undertaken by private sector marketing agents, with funding from the enterprises involved in the market. However, in many Africa countries, export activity is dominated by a relatively small number of actors who have close links to international companies usually located in the major processing countries in India and Vietnam. As a result, some African countries have invested in their own public sector cashew bodies to promote national products directly in consuming countries. This is generally in connection with initiatives to increase local processing and the export of cashew kernels.
- Some governments provide direct investment in trading and/or processing in an effort to establish activities that can then be privatised. This usually happens in the context of projects that have financial support from development partners (e.g. with ACI in Mozambique or with the World Bank in Côte d'Ivoire).
- There has been increasing interest in public-private partnerships (PPPs) as a means of promoting market development without the risk of public investment in the market inadvertently discouraging private sector investment. Formal PPPs are normally reserved for large investments, and this review found no references to PPPs in the cashew sector. However, there are examples of investment starting as public sector subsequently accepting private sector investment (e.g. by INCAJU in Mozambique, with USAID support).
- Grants for investment have been used in some projects. The ACI launched a 'matching grant scheme' in 2012, available in all five ACI countries, with funding from the Bill and Melinda Gates Foundation. This was available to private sector applicants and was to be used for improvements in the whole supply chain, with benefits to farmers as well as traders and processors. The main focus of the fund was on technical improvements, rather than investment in equipment and infrastructure. A total of 27 grants were awarded, worth €10 million.
- The availability of financial services (i.e. credit and savings) is a longstanding challenge in Africa, and smallholder cashew growers face all the normal challenges in access to financial services and in the sustainability of credit supported by the public sector. There are examples of private sector traders and processors offering farmers credit in exchange for commitment on sales, which amounts to a form of contract farming (see above). These schemes are generally tightly managed by traders who are closely connected with producers. In contrast, private

² The examples given here are taken from the literature and are mostly derived from ACI country reports. They reflect the situation at the time the reports were produced, and many policies may have changed in the seven or eight years that have elapsed since the ACI reports were published.

agribusinesses usually have good options for access to financial services and often account for 5–10 per cent of total bank lending in Africa (Byerlee 2013).

- There has been growing interest in the possible role of insurance in African agriculture, particularly in view of increased risks associated with climate change. This review did not identify any initiatives where this has been applied in the case of cashew farmers.

Prioritising market support. Table 4 presents a SWOT (strengths, weaknesses, opportunities and threats) analysis of the cashew VC in East and West Africa. The constraints in each country are set out in more detail in Annex 2. Public policy priorities should be guided by these assessments. The ability to compare assessments between regions and countries gives strong added value to the assessment.

Table 4 : SWOT analysis for the cashew value chain in East and West Africa

	East Africa	West Africa		East Africa	West Africa
Strengths			Weaknesses		
Established processing			Poor post-harvest handling		
Good RCN quality			Poor financial services		
Good kernels quality			Low labour productivity		
Available low-cost labour			Cost of transport and energy		
Technical support			Poor market information		
Intervention			Poor market linkage		
Export controls on in-shell cashew			Small domestic market		
Buyers looking for alternatives			Business and work culture		
Close to markets in EU and USA			Country risk		
International goodwill					
Ports (except Guinea Bissau)					
No trade barriers to the West					
Opportunities			Threats		
Diversifying markets			Price volatility		
Improving post-harvest handling			Lack of financial services		
Demand growth			Food safety issues		
Seasonality			Powdery mildew disease		
Easier product traceability			Old trees		
Broken cashew export to India			Short crops in India		
Increasing value addition			High cost of funding		
New factory food-safety standards			Lack of scale		
			Political instability		

Source: Fitzpatrick (2011), excluding weaknesses for East Africa, which seems to be a misprint in the original paper

5

Management and co-ordination



5.1 Co-ordination

National co-ordination. This section presents the range of public support for the cashew VC.

- The agriculture ministry leads on research and extension and the finance ministry leads on tax policy, including tax incentives.
- Institutional arrangements for supporting processing and marketing (including business development, market information and quality control) are more varied and may include a ministry of trade or industry, an agribusiness department in the agriculture ministry and/or an enterprise development agency.
- Direct public investment in trading and/or processing is normally managed by a government-owned development bank.

Many countries have co-ordinating bodies that may be managed entirely by the government or may have a broader membership. These often focus primarily on production (e.g. INCAJU in Mozambique) or processing and trade (e.g. the Cashewnut Board of Tanzania), in addition to taking a lead in co-ordination. The ministry responsible for agriculture often plays a leading role in the governance of these bodies and, in some cases, the agriculture ministry plays the co-ordinating role alone. The co-ordinating organisations normally have strategies that guide their priorities. For example, in Benin, the Strategy to Review the Cashew Sector includes an action plan that identifies key actions along the VC (Tandjiekpon 2010).

International co-ordination. There are two main international co-ordination ventures: the ACA, which is primarily for the private sector; and Comcashew (formerly the ACI), an initiative with a range of international funders aiming to improve incomes along the cashew VC (see Box 3). In addition to ACA and ACI, the Consultative International Cashew Council was established in Abidjan, Côte d'Ivoire, in 2016.

5.2 Policy co-ordination

A VCA involves co-ordination amongst a range of policies that influence the development of the market. Most of the direct

expenditure of sectoral ministries is devoted to research and extension and rural infrastructure. Traditionally, this expenditure is pursued by relevant departments with only informal collaboration, in the expectation that progress will be made across a broad front of related expenditure, thereby ensuring that no one area acts as a brake to progress.

A VCA involves complementing these traditional areas of expenditure with policies related to market development, some of which may involve relatively little expenditure, while others may have profound implications for the budget, especially if they involve subsidies and market intervention. The main challenge in adopting a VCA is co-ordinating the traditional areas of expenditure with those related to market development. Figure 4 illustrates the interdependence of the main policy areas in the cashew VC.

5.3 Designing programmes for cashew value-chain development

Ideally, cashew VCD programmes should consider a wide set of principles such as a broad and rigorous review of strengths and weaknesses of the value-chain, an assessment of all options for policy support, including a formal appraisal that considers financial, economic, social and environmental issues, and appropriate monitoring, management and evaluation practices. The ACI conducted country case studies between 2009 and 2010 that included standardised SWOT analysis for each country (see Table 4). However, some additional care is required for the following issues:

- understanding of current market conditions and future market prospects and how these affect the viability of the programme;
- the profitability of activities for all farmers and enterprises involved;
- the arrangements for co-ordination of all policies involved, with particular attention to the need to support market development in a way that avoids unfair competition between public and private sector actors in the market; and
- arrangements for institutional co-ordination, including public institutions and business associations.

Box 3: The African Cashew Alliance and ComCashew (or the African Cashew Initiative)

The African Cashew Alliance (ACA) was established in 2006 as an association of businesses engaged in cashew production, processing and marketing in Africa. It currently has nearly 130 African and international members. The ACA aims to:

- facilitate networking, including at meetings and annual conferences, and via the members' areas of the ACA website;
- provide timely market information, including weekly and monthly market updates;
- advocate for partnerships;
- facilitate food safety standards, including managing the ACA Quality and Sustainability Seal; and
- Increase processing in Africa, including offering services for feasibility studies and due diligence, making connections with local investment councils and training banks in the potential for investment in cashews.

In 2010, the ACA produced the Maputo Declaration on the Development of Africa's Cashew Industry, which called for more support for producers, farmer groups, research and development, incentives for processors, global marketing and donor investment.

ComCashew is a public sector and civil society organisation (CSO) initiative, and is the third phase of a programme that started with the formation of the African Cashew Initiative (ACI) in 2009. It has focused on five countries (Benin, Burkina Faso, Côte d'Ivoire, Ghana and Mozambique). Funding has come mainly from the Bill and Melinda Gates Foundation (BMGF) and the German Ministry for Economic Co-operation and Development (BMZ).

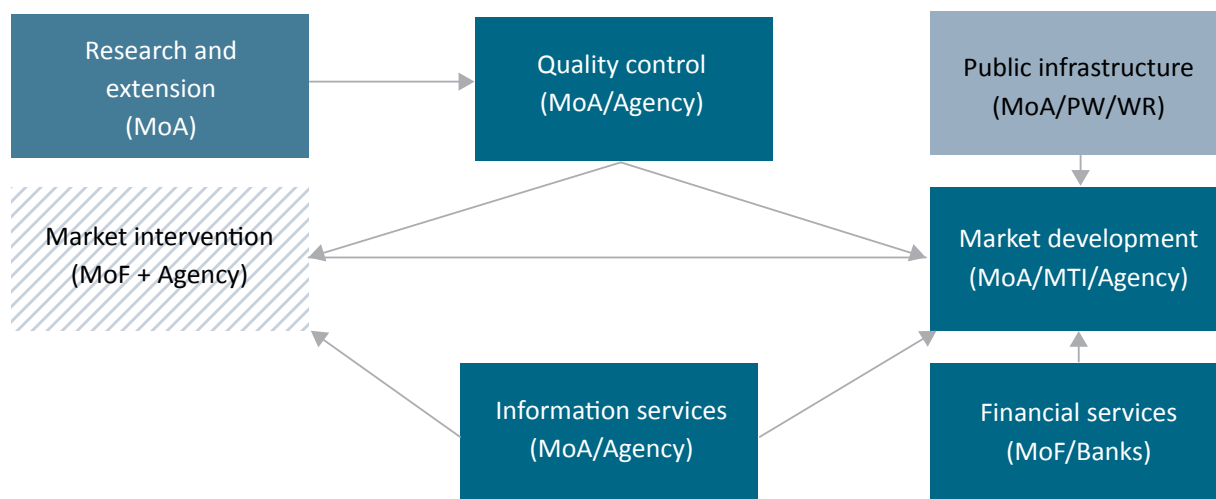
The programme has focused both on improved farm productivity, mainly through training and improved planting material, and on improving the marketing and processing of cashews, including investment in new processing capacity using a 'cashew matching fund'. According to the ACI website, the programme has trained nearly 500 000 farmers, improved farm productivity by 75 per cent, and increased farm incomes by USD161 per farmer. Processing capacity in the five countries has increased from 8 800 tons to 250 000 tons in 2016, creating 5 800 new jobs, of which 73 per cent are held by women. ACI supported 20 processors, of which are already self-sufficient.

Two evaluations of ComCashew and ACI reached the following conclusions (Heinrich 2012; CPI 2017).

- There was strong success with stakeholder engagement, political commitment, public confidence, management and collaboration. The objectives were clear and technical expertise was good. However, the level of evidence on impact was weak.
- The innovative institutional collaboration was a critical element in being able to address the dominance of Asian companies in processing, but the complexities and transaction costs of this collaboration were underestimated when ACI was designed. This challenge increased as stakeholder partnership broadened and when the ACI received significant new support from BMGF. Some of these challenges related to operational differences (e.g. on result indicators) and others related to differences in institutional culture.
- Flexibility and learning were challenging for the lead agency and other stakeholders.
- The use of a VCA also added complexity to the programme because it involved a wider range of actors than is involved in more conventional programmes that focus primarily on production and leave markets to respond without support.
- Building value chains takes longer than was expected in the ACI design and needs sustained support over a longer period than was originally anticipated.
- Cashew VCD is limited by broader constraints in the overall business environment and, although ComCashew is well placed to influence improvements in the business environment, given its institutional partners, this is a complex challenge that will take time to address.

Source: ACA website

Figure 4: Interdependence of public policy and investment



Note: degree of shading indicates likely strength of contribution to VCD (hatched could be +ve or -ve)

Box 4: The Côte d’Ivoire Cashew Value Chain Competitiveness Project

Côte d’Ivoire is starting a Cashew Value Chain Competitiveness Project (CVCCP), with funding of USD200 million from the World Bank and USD85 million of private investment. The project has four components.

1. Institutional strengthening (USD14.4 million), focusing on the key supporting and coordinating institutions, both public and private. This includes support for reforms to the regulatory environment and to contractual relationships between VC actors.
2. Productivity enhancement (USD57.8 million) covering research and seedlings, extension and rural roads, where market access is a critical constraint.
3. Post-harvest and processing (USD110 million from the World Bank and USD85 million from the private sector), including investment in warehousing and processing, support for financial services and market information.
4. Project co-ordination, monitoring and knowledge management (USD16.7 million).

The CVCCP was subject to a standard World Bank appraisal in 2018, which included the following elements: a review of the relevance of the project for existing strategies and policies; expected benefits, including for farmers and enterprises; project description and implementation mechanisms; a risk analysis, including economic, policy, environment and climate risks; and an economic analysis that focused on the profitability of all actors.

Source: World Bank (2018)

6

Lessons and key issues for dialogue



Potential dialogue questions are highlighted in bold.

Understanding the incentives in the VC

- Most high-value agriculture products in Africa are produced by smallholders in mixed farming systems. It could be useful for programmes that support high-value, labour intensive production to better understand the incentives for farmers in cultivating those products, beyond the simple analysis of profitability. **Are there any country examples of stock-take/research into farm incentives for production of cashew, including incomes, but also extending to resilience, social and environment issues?**
- In this case-study, there are questions about competitiveness of micro-processing and difficulties for smaller scale processors of engaging in purchasing/selling. What are the key constraints for smaller-scale processing in your country? **What are the limitations of supporting further processing of the cashew nut? What government intervention would lower limitations?**
- **Have you identified opportunities for increasing marketing and commercialisation of nationally processed products for niche markets (i.e. fair trade and organic farming)? Would there be potential for such products in regional trade blocs within Africa (i.e. locally sourced and made)?**

Overall Coordination

A few countries have targeted VC development strategies (e.g. cashew). These usually include an analysis of constraints and opportunities for each actor in the chain.

- **Does your country have a dedicated VC (e.g. cashew) coordination mechanism? If so, which stakeholders are included and what is their role (e.g. MDA, CSO, NGO, development partners)? Which other stakeholders should be engaged and what would be their mandate?**
- **For targeted CV programmes, which criteria do you consider when assessing if interventions will be included in the VCD programme (i.e. cashew) or whether those will be included in broader agriculture support programmes?**

Role of Development Partners

Development partners' aid modality of project support align with a VC approach. The new World Bank cashew project in Cote d'Ivoire is an example of a very large project that has the resources to address the most critical challenges in the value chain. This is appropriate for Cote d'Ivoire, as the largest African producer, but an alternative 'scaled down' approach may be more appropriate for smaller producers, which might require a cluster of interventions that are separately managed.

- **What are the pros and cons of having separately managed interventions for supporting on VC?**
- **Which VC policies are best left to be managed by national budgets? For example, can research and extension be excluded from donor funding but still involve technical collaboration with development partners?**

Public-Private Collaboration

There are good experiences with public-private partnership (PPP) in the cashew VC, especially with initiatives to promote smaller-scale processing capacity.

- PPPs seem to have focused on investments in processing activities, which may also include some trading arms. **Would it be possible to develop PPP initiatives that focus on services for trading and/or marketing (e.g. market information and promotion and quality certification)? What would be the main considerations in establishing these PPPs?**

Regional and Pan-African Opportunities

Cashew VCD is influenced by economic policies determined both by trade agreements (eg ECOWAS) and by monetary unions that influence exchange rates and export competitiveness. These are sensitive issues, but improved collaboration might be possible in some of the following areas.

- **Coordination of regional policies to improve supplies to larger processing facilities based in the region.** In practice, as large processing facilities cannot be built in all producing countries, this is likely to involve acceptance for greater cross-border movement, which is a sensitive subject and may require some formal regional agreement. **Is it practical to undertake PPP investments across country borders? Are there any examples where more than one government takes a stake in a PPP? Would this have to happen within trade blocs?**
- **Joint marketing initiatives.** These require a delicate mix of public and private perspectives as well as resources. Regional African collaboration in exporting raw cashew nuts is going to be challenging, given the current concentration of market power amongst the larger international commercial cashew enterprises. **In which areas are there opportunities for joint marketing initiatives (e.g. a cashew auction system)?**

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Annex 1: Results transmission channels

Details of the change initiated by the intervention Details & risks that may influence effectiveness of this channel		Results by transmission channel	Rating	Risks that the results will not be achieved	Quality information and analysis
Prices	Direct sales premium by selling directly to the processors	Producers may obtain between 10–20% price increase contrary to 30% estimated in the grant proposal.	+	<ul style="list-style-type: none"> • Very little margin for processing companies • Some farmers will not get information on direct sales and their prices. 	good information
	Price increase through higher bargaining power of cooperatives	Farmers belonging to cooperatives may improve their income through bulk selling to processors.	0	<ul style="list-style-type: none"> • Cooperatives may not be well organised • Abuse and mismanagement of cooperatives • Bad leadership in cooperatives. 	some use
	Differentiated process by quality and certification premium	It is estimated that ¼ of farmers could obtain 22% increment due to differential process offered as a result of improvement in quality and certification.	+		excellent
Productivity	Productivity of farmers will increase	Potential for increase in yields by 123% to 228%.	++	Increase in volume of engagement for extension service providers.	good
Employment	Seasonable employment in cashew farms	Increased productivity of existing cashew farms by 100% will lead to additional employment of seasonal labour. (Actual cultivation of 25 000 ha could be equivalent to about 1 million man-days of hired labour.)	++		adequate
	Women working on their husbands' land	19.7% of rural women in Ghana work more than 40 ha on their main job, compared to 29% of rural men.	0	Increase in volume of engagement for extension service providers.	some use
	Children working in the family farms	Temporary employment for children to acquire basic education needs.	0		some use
	Employment in processing companies	It is estimated that there will be 2 120 additional employees (mostly women) in processing when national processing capacity is increased.	++	Required working capital to expand the national processing capacities.	excellent
	Tertiary and secondary employment	Not significant although employment can be generated from tertiary and secondary levels (e.g. fabricating workshops for manufacturing cutters.)	0		some use
	Marginalisation of traders	Not significant. Doesn't affect the poor.	0		poor
Authority	Direct relationship with processing companies	Increase in farmers' bargaining power as processors depend on them for supply, and there are still enough traders.	+	Trust within cooperatives.	adequate
	Organisation of farmer cooperatives	Bargaining power against traders and processors.	++		some use
		Abuse of power in cooperatives through bad leadership.	--		adequate
	Changes in land rights through cashew planting	<ul style="list-style-type: none"> • Could reduce land access for youth, women tenants and subjects • Could increase land rights of farmers 	-- +	Through negotiation, tree cropping can increase land rights for migrants.	some use

Assets	Physical	Improvement of cashew farms through pruning and thinning.	++		excellent
		Private sector will invest in increased processing.	++		excellent
	Financial	Direct financial investment in cashew processing.	++	<ul style="list-style-type: none"> • Little margin for processing companies • High labour costs in the country. 	good
Access	Access to information	Processing companies directly inform farmers about prices and quality requirements.	+		good
	Access to income sources outside the season	Generation of income during the lean season.	++		good
	Access to credit for farmers	Well structured cooperatives may access credit using cashew trees as possible collateral.	0	<ul style="list-style-type: none"> • Depends mainly on the formalities of cooperatives • Traditional land rights make banks reluctant to give credit 	some use
		Using investments and working capital to access credit	.+		some use
	Access to market for processors	Increase access to markets for national processing companies.	+		some use
	Access to markets for farmers	Farmers already have access to markets.	0		adequate
		Access to markets for cashew apples,	+		adequate
Transfer	Levies (and bribes)	Municipal/district assemblies are charging levies per bag of raw cashew nuts leaving the assemblies.	-		some use
		Attempt by COCOBOD – Quality Control Division to collect levies on quality certification	-		some use
	Private remittances	Not significant	0		poor

Annex 2: Constraints in the value chain

Origin	Country storage	Trucking	Port	Freight costs
Benin	Poor in quality and volume	Movement is difficult and expensive. USD35–45 per tonne to port	Good facilities at Cotonou including storage, country to port FOB USD55 estimated	USD850–900 per container to Cochin
Burkina Faso	No data	High cost by virtue of location	Export by truck	Freight via Ghana or Ivory Coast
Ghana	No data	No data	Good facilities at competitive prices	USD850–900 per container to Cochin
Guinea Bissau	Country storage of sufficient quality not available	USD35 per tonne	Charges USD40 higher than Banjul, country to port FOB USD150 per tonne	USD1 950 per container to Cochin, USD62 per tonne higher than Abidjan
Ivory Coast	Poor quality with cashew nuts becoming damaged and not dried properly	Korhogo–Abidjan USD112 per tonne depending on roadblocks	Estimated costs USD58 per tonne at the port including certificates excluding profit margins, very high costs both for trucking and port	USD850–900 per container
Kenya	All post-harvest services are poor including storage; port facilities are adequate	Product located close to the shelling plants or points of export	Export of in-shell is banned	No export season
Mozambique	Poor quality	USD30 per tonne estimated	Export costs USD40 per tonne	USD 1 100 per container
Senegal	Low quality storage in Casamance	No data	Goods primarily exported via Banjul in The Gambia port is efficient and costs are cheaper than Dakar by as much as USD60 per tonne	No data
Tanzania	Storage via the warehouse warrant system	Trucking reported to be expensive	Facilities at Mtwara and Dar es Salaam can cope with cashews, country to port FOB USD79 estimated	Mtwara USD 1 100 per container; Dar es Salaam USD1 250 per container
The Gambia	Poor quality	Short journeys, competitive costs	Banjul is a competitive port attracting cashew traffic from Senegal	USD1 200 per container