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Policy Dialogue

The role of governments in developing agriculture value chains

2019

Case study 3

Public financial management implications for a value-chain approach in the agricultural sector

#MoreThanJustCrops

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Acronyms and abbreviations

ACA	African Development Bank
AGRA	Alliance for a Green Revolution in Africa
ATA	Agricultural Transformation Agenda
AUC	African Union Commission
CBA	cost-benefit analysis
MCA	multi-criteria analysis
M&E	monitoring and evaluation
NAIP	national agricultural investment plan
PFM	public financial management
UNECA	United Nations Economic Commission for Africa
VC	value chain
VCA	value-chain approach
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 policy dialogue. This case study has been prepared for the CABRI Policy Dialogue on Value for Money in Agricultural Spending. The dialogue considers the implications for public financial management (PFM) of adopting a value-chain approach (VCA). As with other CABRI dialogues, the objective is to bring together officials from ministries of finance and relevant government institutions to exchange experience. This case study considers the PFM implications of taking a VCA in the agricultural sector. Two other case studies consider the rice and cassava VCs in Nigeria, as examples of domestically consumed crops, and the cashew VC, as an example of an export crop.

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 climate, exacerbated by climate change.

Role of government. The role of the government in agriculture is complex. Research, extension, 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 is filling 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 allocations 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. 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 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 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 sector, the objectives, decision-making and language of the public and private sector are different and also need to be bridged. Finally, VCAs are often applied to specific crops, and governments, therefore, must take great care in selecting successful crops.

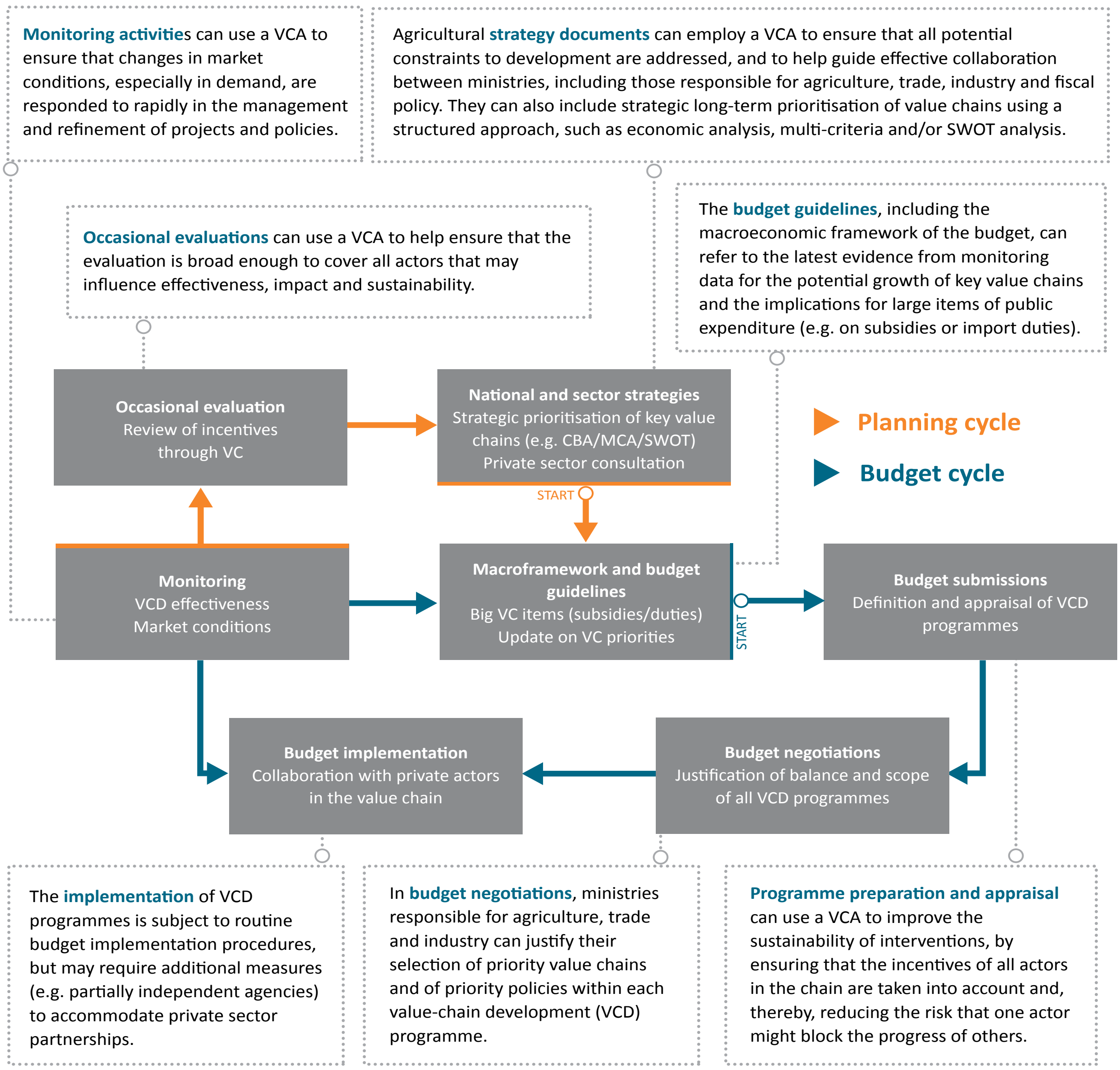
Objectives of the case study. The objective of this case study is to consider the implications for PFM of taking a VCA in agriculture, including planning and budgeting. The study aims to cover the full range of policies that may be involved in a VCA, including direct public expenditure, fiscal policies, regulations and other incentives.

2 Integrating a value-chain approach into agricultural planning and budgeting

2.1 Integrating a VCA into the planning and budgeting cycle

The planning cycle. The key points at which a VCA can improve planning and budgeting activities are depicted in Figure 1.

Figure 1: Value-chain development in the planning and budgeting system



2.2 Strategic context and the role of agricultural transformation agendas

The first step in integrating VCAs into planning and budgeting for agriculture is to include them in national and sector development strategies. In most African countries, planning and budgeting for the agricultural sector are guided by a national development plan and an agricultural sector strategy, which aims to cover the full range of public policy and to provide clear prioritisation. In 2015, the African Union Commission, United Nations Economic Commission for Africa, African Development Bank and the government of Senegal held a conference on 'Feed Africa: An Action Plan for African Agricultural Transformation', which stressed the need for agricultural strategy to cover the full VC, including the role of the private sector (AfDB 2015). Some African countries have produced agricultural transformation agendas (ATAs) (e.g. Nigeria and Ethiopia), or integrated ATAs and national agricultural investment plans (e.g. Malawi), and the AfDB has produced the Feed Africa Strategy to guide their activities in the agricultural sector (AfDB 2016).

In order to provide guidance for the integration of a VCA into planning and budgeting, it is important to describe the VCs and the full range of policies that can influence VCD. At a strategic level, this includes providing analysis of likely trends in demand for key agricultural products, including both domestic and export demand, and the implications that demand and supply trends are likely to have for prices.

2.3 Balancing sector-wide support with dedicated VCD programmes

Focusing on developing one specific VC helps that VC, but it also draws resources away from other VCs. To overcome this implied opportunity cost, sector spending normally includes: (i) a mix of dedicated VCD programmes; and (ii) routine programmes that cover many VCs and have integrated a VCA into their design. There are good opportunities for co-ordinating the two elements:

- VCD programmes are usually dedicated to either one VC or a small selection of VCs, and aim to address all the key activities in the chain.
- A sector-wide VCA involves taking a broad overview of the VCs that are supported by each VCD programme to make sure that all the top priority VCs are covered and to bring about more flexibility to respond to evolving market opportunities (IFAD 2014).
- Some types of public intervention may be relevant for many VCs in the agricultural sector, but have a stronger VCA focus (e.g. market information systems, agribusiness development, post-harvest storage and marketing, and trade policy). A sector-wide VCA can involve shifting resources into these types of intervention.
- A VCA can be integrated into routine policies and programmes even if it does not focus on one particular value-chain (i.e. 'mainstreamed'). This can involve giving additional priority to services that focus on VCs and cover many products (e.g. market information programmes or financial services). It can also involve adding new dimensions to conventional services (e.g. giving the extension service increased capacity to help with group marketing or farm business planning).

Dialogue question 1: Balance between dedicated VCD programmes and 'mainstreaming'

How is VCD incorporated into your planning and budgeting processes? (e.g. dedicated VCD programmes and projects, prioritising some VC services to focus on VC, VC support integrated in sector-wide programmes.)

2.4 Funding VCD programmes

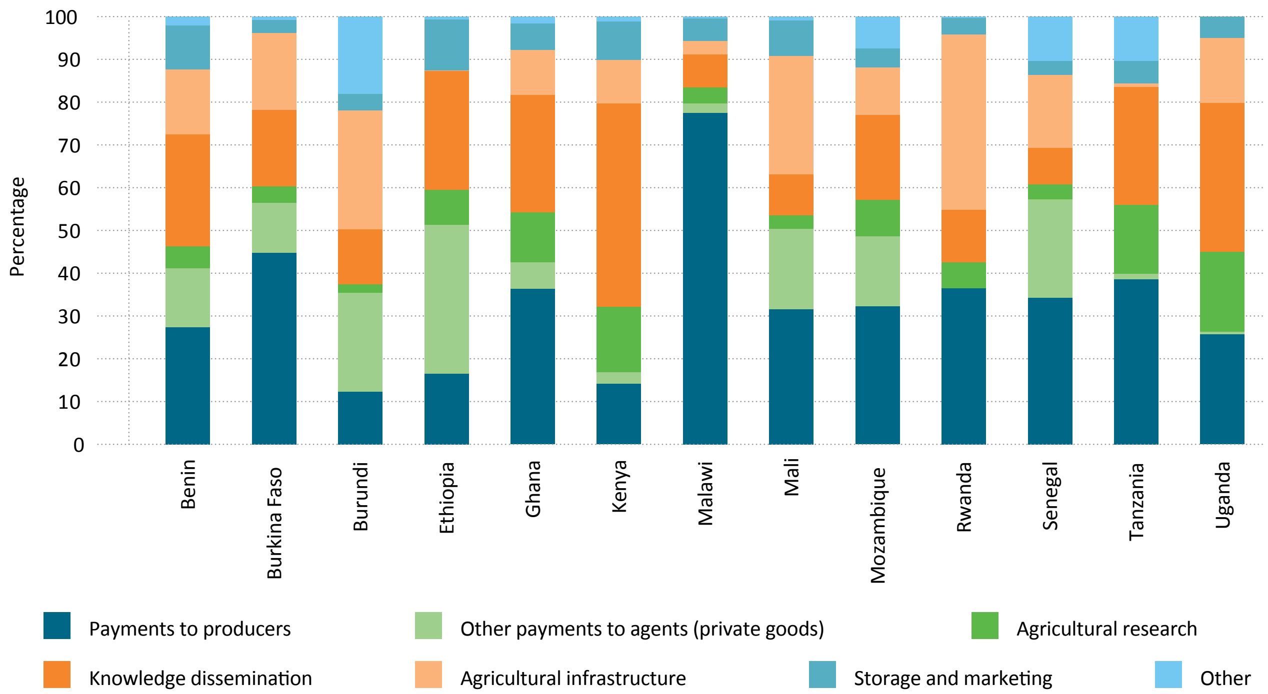
Public funding for VCD programmes can be addressed from both a bottom-up and a top-down perspective. The top-down perspective considers the appropriate share of total agriculture spending to be allocated to VCD programmes. The bottom-up perspective involves a typical programme preparation exercise in which the full range of potential funding needs are defined and are subjected to the normal programme preparation cycle, from preparation to feasibility to appraisal, bearing in mind the guidance on total funding available for all VCD programmes.

Total funding for agriculture. Funding for VCA activities usually has to compete with other sector funding, given the tough budget negotiations facing most ministries of agriculture. The CAADP calls for at least 10 per cent of public spending to be devoted to agriculture and the Agriculture Orientation Index has proposed refined levels of this target to reflect the size of the agricultural sector. Assessing whether these targets have been met is complicated, not least because there are large elements of 'agriculture-supportive' expenditures, which typically account for 40 to 60 per cent of total agricultural expenditure (Pernechele, Balie & Ghins 2018). However, experience over the past ten years suggests that, while agriculture did benefit from an increased share of funding in some countries immediately after the Maputo Declaration, agriculture's share of total public expenditure has not continued to rise in most countries; therefore, it seems unwise to rely on a significant increase in total funding for agriculture, as a share of total public spending.

Total funding for all VCD programmes. It is useful to assess the current funding for VCD-related activities to allow for monitoring of funding trends and to evaluate efficiency and impact of VCD programmes. There are no guidelines on how to assess the appropriate share of total agricultural spending that might go to VCD programmes. The starting point for such guidelines might be the current spending related to VCAs. However, there is no review of the current share of agricultural spending that is devoted to VCD programmes and no agreed methodology for defining this share, given the grey area between devoted VCD programmes and sectoral interventions that adopt a VCA, at least in part. Some indications are given in the following points.

- A review of agricultural spending in Ghana suggested that about 10 per cent of total agricultural spending was devoted to single crops and a further 20 per cent to groups of crops (FAO 2014). The review did not specify whether these programmes took a VCA, but, given the priority given to VCA in African agricultural strategies, it is likely that most of the single crop spending had some element of the VCA and could be described as VCD spending.
- Figure 2 graphically illustrates the composition of agricultural spending in 13 African countries. Payments to producers and agents mainly involve market intervention in input supplies and/or crop marketing. These may be designed as part of a VCA, but are more likely to be separate programmes aimed at increasing production or stabilising prices. Research and extension (i.e. knowledge dissemination) is often provided in VCD programmes, but most of this expenditure shown in the figure is likely to be routine research and extension, without any specific VCA. Agricultural infrastructure may include some market-connected infrastructure that is part of a VCA but relates mostly to rural roads and irrigation, which may contribute to VCD implicitly, but are unlikely to have been designed as part of an explicit VCA. The main item that is likely to include an explicit VCA is storage and marketing expenditure, which typically account for 5–10 per cent.

Figure 2: Composition of public agricultural expenditure, 2006–2015



Source: Pernechele et al. (2018) Note: Covers actual expenditure from national and external sources.

Funding for each VCD programme. The appropriate share of the funding for all VCD programmes that is allocated to each individual VCD programme depends on the extent of the VC and the nature and cost of the interventions that are required, bearing in mind that good VCD programmes normally focus on a limited range of interventions, to retain management effectiveness. Table 1 presents the fiscal impact of the main interventions that may be involved and can be used to assess the relative needs of each VCD programme. The most expensive policies are often those associated with direct market intervention. In theory, it is possible to limit the fiscal cost of this but, in practice, the prices of key agricultural inputs and products are highly sensitive and governments often find it difficult to limit expenditure, once policies have been introduced. Apart from direct intervention, the other two policies that usually account for a large share of a VCD programme are rural infrastructure and market support, including grants, loanable funds and any equity investment by the government. The costs of regulation, information and technical assistance for the VC are lower, but they are often underestimated and mechanisms needs to be found to ensure that the recurrent costs are either given priority in the budget or funded through a levy or some other independent source.

Table 1: Likely fiscal impact of VCD policies

Policy	Typical fiscal impact	Cost (1=low)	
		Rec.	Cap.
Research and extension	Typically accounts for the largest share of the recurrent budget.	3	-
Information services	Modest recurrent funding and may have occasional, modest project support for an initiative or upgrade.	1	1
Market intervention	Direct intervention in input supply or crop marketing can be very large and volatile. Costs may be hidden in parastatals.	5	-
Regulation	Little direct budget commitments but costs of enforcement of regulations are often underestimated.	2	-
Quality control	Cost of enforcement often underestimated. Occasional small investments in upgrading.	2	1
Roads and irrigation	High investment costs. Maintenance costs are also high and often underfunded.	3	4
Market infrastructure	Relatively modest and potentially self-financing.	-	2
Tax incentives	Potentially large, for major export or food import crops.	3	-
Market support	Potentially large investment in public equity. Some grants, loanable funds and technical assistance.	2	4
Trade policies	Significant costs from reduced duties and for customs. Some investment in new agreements.	3	2

Source: Author interpretation

Dialogue question 2: Funding for VCAs across the agricultural sector

What considerations are necessary when determining the share of total agricultural sector finance to be allocated to specific VCD programmes? Some considerations that you might find useful:

- Some VCs are more challenged than others by poor VC markets and, hence, more likely to benefit from a VCD programme. How important are these VCs in total agricultural GDP?
- Are there good examples of successful VCD programmes, either in the country or in similar VCs in other countries, that promote confidence that future VCD programmes will be successful?
- Are there any highly sensitive policies that are likely to undermine the effectiveness of VCD programmes and are unlikely to be influenced by VCD programmes? These are mostly likely to be related to intervention in markets for inputs or products.
- Are there opportunities for attracting additional funding from development partners if a VCA is included in development programmes?

2.5 Monitoring and evaluating VC performance

The selection of priority VCs requires a significant investment in studies to understand how the VC works at present (including the actors, their incentives and the key challenges) and the options for resolving constraints. These studies can continue through to the monitoring of actual progress. This is particularly important for a VCA, because market conditions can change rapidly and policies need to adjust as dynamically as they would in a private enterprise. Public sector decisiveness is always likely to be slower than in the private sector, because of the need to build in checks and balances, but many decisions will need to be taken in days and weeks, rather than in months or years.

As with any approach to development, monitoring and evaluation (M&E) for a VCA is usually based on indicators of existing and target performance. These indicators can be quantitative and/or qualitative. For a VCA, it can be particularly useful to consider these indicators as benchmarks against which to compare the performance of different enterprises or communities. Private enterprises are often particularly interested in benchmarking services, because it helps them to compare their own performance with their competitors. Extension and advisory services often offer farmers and enterprises a benchmarking service, and some of these are self-financing, driven by the interest of participants and their willingness to pay a fee for the information provided. Comparisons can extend to performance in other countries (which sometimes is referred to as gap analysis).

M&E for a VCA usually addresses both the perspective of the participating enterprise (i.e. its continuing profitability) and wider public support (i.e. the additional social and environmental benefits that may accrue to justify public support). PAID (process indicators, action indicators, investment indicators an delivered results) is a multi-criteria analysis (MCA) method that has been developed specifically for VCA M&E and covers indicators for process (for engagement in the VC), action (for policy actions), investment (for private and public) and delivered results (for productivity and value added) (Webber & Labaste 2010).

Dialogue question 3: Evaluating VCA programmes

- How do you monitor the performance of government interventions in supporting specific VCs?
- How do you evaluate their performance? What five quantitative or qualitative milestones would you choose for that assessment?

2.6 Institutional co-ordination of a sector-wide VCA

VCD programmes are managed through the same planning and budgeting procedures as conventional agriculture programmes.

- The ministries responsible for finance and planning set overall line ministry ceilings and provide strategic guidance on development policy. The ministry responsible for agriculture provides strategic guidance for the whole agriculture sector and leads on the preparation and management of interventions in the agriculture sector. However, VCD programmes may require more active collaboration with other ministries than with routine agricultural services and investment.
- The ministry responsible for trade and industry will collaborate in the design of VCD programmes and may take the lead in some components, such as those dealing with the business environment.
- Some elements of rural infrastructure may be led by other line ministries (e.g. for rural development) or by local government.
- Development partners often play a crucial role in VCD programmes, including in funding actions and providing expertise.[1]
- International institutions have played an important role in the growth of VCA in Africa. Pan-African institutions have been instrumental, especially through the Maputo Declaration and the adoption of Agricultural Transformation Agendas (ATAs). There is also potential for better VCD through further improvements in regional trade policy within Africa.
- The private sector is central to any VCD programme and is usually included in decision-making, with a formal consultative role in the governance structure.

1 The 2014 MAFAP analysis suggested that there were large variations in the contributions of development partners to public agricultural expenditure, with two having less than 20 per cent (Kenya and Malawi, largely because of domestic funding in market intervention) and three having more than 70 per cent (Burundi, Ethiopia and Ghana) (see FOA 2014).

Dialogue question 4: Private sector collaboration

In your country, is there a role for the private sector to collaborate in the following areas? Why or why not?

- participation in the preparation and monitoring of sector strategies;
- participation in the design of VCD programmes;
- participation in the management of VCD programmes (e.g. by business associations);
- commitments to codes of practice that are normally motivated by improving supply chains but may also relate to corporate social responsibility;
- collaboration in joint public–private market development activities (e.g. new contracting arrangements, cross-investment and collaboration on information services); and/or
- formal public–private partnerships involving equity sharing.

In addition to mainstreaming VCA into the routine tasks described above, some countries have promoted a VCA through the establishment of a cross-cutting council for the promotion of a VCA. For example, ATAs may be guided by an ATA council, chaired by a central figure, with participation from public and private bodies (e.g. in Ethiopia, which has both an Agricultural Transformation Council and an ATA).

Dialogue question 5: Overall co-ordination

An overall co-ordinating body, with representation from all actors in the VC, has the potential to promote VCA mainstreaming and to improve dedicated VCD programmes. However, there can also be significant challenges, costs and delays associated with such co-ordination, and this creates the risk of initiatives becoming bogged down.

- In your country, what are the potential benefits and costs to having a formal co-ordination body to promote a VCA? What should their role be (e.g. an advisory role or simply to approve proposals for a dedicated VCD programme)?
- Would it be practical to have regional co-operation in dedicated VCD programmes that operate in several countries? If so, could they assist in co-ordinating policy reforms, or should this emerge from higher-level regional political debate (e.g. trade negotiations)?

3 Value-chain development programmes

3.1 Selecting priority VCs

Selecting priority value chains is a critical step in ensuring that the chain gives the best return on public expenditure. This involves understanding the relative importance of alternative chains for the strategic national objectives for agriculture and the likely success of public intervention in the selected chains. Typically, this assessment is conducted using a mix of two methods.

Multi-criteria analysis (MCA). In most cases, VCs are selected using an MCA, which allows relevant issues to be addressed without a complex analysis. An MCA involves scoring the VC according to its contribution to a range of criteria and then calculating a total score. The results depend on the criteria selected, and there can be issues relating to duplication from having similar or related criteria. Weighting criteria can help to resolve issues of duplication. There are many different examples of criteria systems (IFAD 2014; AfDB 2016; IGC 2018). Most of the systems use some or all of the following criteria.

a. Demand is often the first criterion, and refers to the potential growth in demand.

b. Competitiveness is also an essential criterion, and is related to profitability, effectiveness, impact, sustainability, and returns to land or labour. It may also be related to criteria for value addition and multiplier effects.

c. Social benefits feature as a criterion in many MCAs, and may be described as equity, poverty reduction or delivering benefits to targeted vulnerable groups (e.g. women and youth).

d. Feasibility or practicality refers to the probability that expected results will be delivered. This can be related to efficiency, effectiveness and building on existing experience.

e. Environmental sustainability is sometimes included, although this is less common. It can be referred to as natural resource constraints.

f. Resilience is included increasingly, and usually relates to climate change.

g. Institutional change is included sometimes, although this can duplicate other criteria, such as 'change to business environment' or 'transformational change'.

Financial and economic analysis. Financial analysis is important for VCD programmes because it assesses the profitability of all actors in the chain. It is a technique used by both the public and private sectors and so helps to build partnerships between the sectors. In theory, financial analysis can be expanded into an economic analysis, which provides quantitative estimates of the wider values associated with many of the criteria in an MCA (IFAD 2016). For example, analysis of beneficiary incidence, such as Poverty and Social Impact Assessment (PSIA), helps to assess wider social advantages arising from the distribution of benefits. Economic analysis for VCD programmes places extra emphasis on uncertainty in market conditions (e.g. related to weather or price volatility). In practice, economic analysis is too complex to be used for VCD selection, and is normally reserved for the design and appraisal of major VCD programmes that have already been selected.

Dialogue question 6: Selecting value chains

There are many methods for conducting an MCA, as reviewed above. Do the items a) to g) cover the full range of criteria needed? Is it useful to think of an improved version of this list as a menu of options, from which Africa countries can select their own set of criteria? If so, which additional criteria would you suggest?

Using the criteria listed in the text and the additional criteria you have suggested, perform an analysis on two or three value chains in your country. What conclusions can you draw from this, and which value chain would you prioritise?

Private investors in VCs will normally undertake a financial analysis of the profitability of their investments. In theory, the public sector should also do this but it rarely happens. Would it be useful (and practical) to have more financial analysis in the design and appraisal of VCD programmes?

3.2 Designing VCD programmes

Designing programmes in support of VCD requires special considerations.

Covering a range of interventions. A VCD programme typically involves a range of different interventions applied at selected points of the VC. These can include the broad types of intervention listed below.

- ***Research and extension*** is normally addressed by routine government services but may need a boost from a VCD programme.
- ***Market information services*** are often central to VCD programmes, and may be provided as stand-alone services for the VC selected or as a special focus for a broader sectoral service.
- ***Market intervention and regulation*** is challenging as VCDs often operate in markets that have limited private sector capacity, where the government is wanting to give temporary support while also providing commercial space for market development.
- ***Quality controls*** are increasingly important for international and domestic markets and are often a key feature of VCD programmes.
- ***Public infrastructure*** is often less important in VCDs than in conventional sector planning, but VCDs may still support market structures and targeted rural roads.
- ***Market support*** is often a key element of VCD programmes, and may include grants, public equity and support for financial services (savings, loans and/or insurance). It may require collaboration with the ministry for trade and industry.
- ***Trade policies*** may also feature in VCD programmes. High-level trade negotiations may not be affected, but detailed procedures (e.g. customs requirements, mutual recognition, harmonisation of standards and regional trade facilitation) may be covered. Collaboration between the institutions involved is rare yet important (UNECA 2009; FAO 2018).

Dialogue question 7: Selecting interventions for VCD

For a priority VC in your country, list the range of possible interventions that could be considered.

- Which of these interventions do you apply in supporting that specific VC? At which stages of the VC is this done?
- Are there specific interventions that should be strengthened or added in order to support that VC? At which stages?

Prioritising interventions. In theory, a VCD programme might wish to cover a large number of interventions. In practice, there is persuasive evidence that complexity adds significant burdens to a VCD programme, in terms of costs associated with administration and scarce skills and delays in implementation. Therefore, there may be limitations in terms of the number of interventions, depending on the scale of the programme and the range of problems in the VC. Progress with other areas of intervention can sometimes be achieved through co-operation with activities implemented outside the VCD programme.

Box 1: AGRA recommendations on policies for VCD

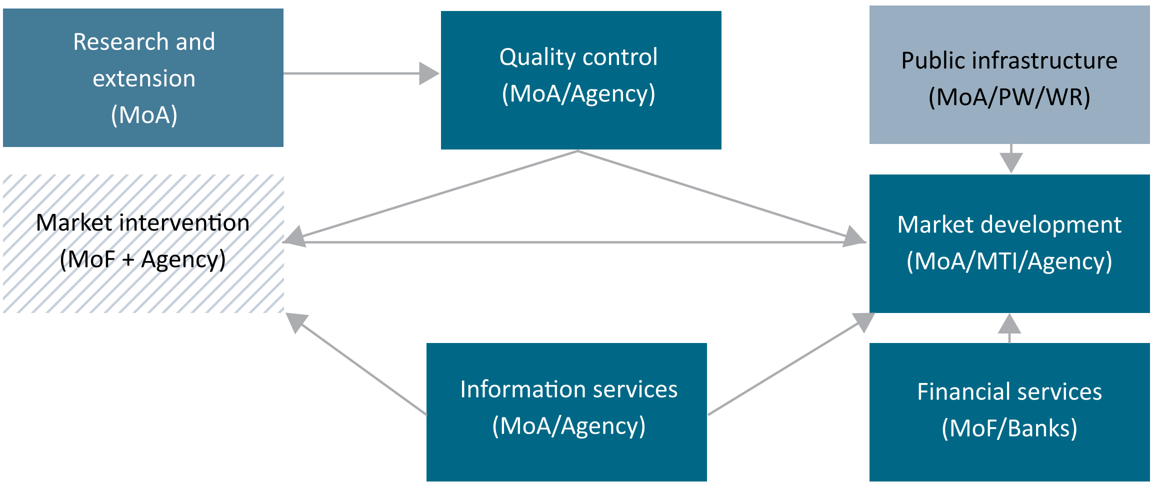
The AGRA review of the state of agricultural business in Africa concluded with the following 13 policy recommendations, grouped under five headings.

- ***Enabling policies:*** improve the business environment; strengthen public institutions; free up regional trade; increase public investment in rural infrastructure
- ***Private sector engagement:*** improve smallholder organisation; innovative public–private partnerships including small actors; recognise smallholder diversity
- ***Finance:*** public support for finance for small actors; standards for digital finance; information systems for finance
- ***Resilience:*** sustainable intensification; support to protect from climate/market shocks
- ***Implementation:*** focus on first movers to gain an entry point

Source: AGRA (2017)

Phasing interventions. Where programmes cover a range of interventions, phasing can be critical. In particular, the introduction of market support for business development may need to be delayed for several years, while information and price policies are refined and institutional capacity and capabilities are built. Figure 3 illustrates some of the key linkages between the various intervention types.

Figure 3: Interdependence of public policy and investment



Source: Authors' interpretation
Note: Degree of shading indicates likely strength of contribution to VCD (hatched could be +ve or -ve)

The phasing of programme components also needs to take account of seasonal and budget cycles. If support for the input supply market feature in the programme, care must be taken to ensure that funds are available early enough to facilitate timely supplies of inputs, given realistic assessments of the time required for procurement, transport and sales. This can be especially problematic if the agricultural season starts early in a budget year, in which case programmes have to be phased so that the input supply operations can happen in the year after the funding is provided for in the budget.

Dialogue question 8: Designing VCD programmes

In your country, do you consider any of the following when conceptualising a VCD programme?

- the content and level of detail required in market analysis;
- the full range of possible policies/investments that must be taken into account;
- how to approach the phasing of, and fund allocation to, each policy; and
- the participation of the private sector and/or CSOs.

What else might be important? Begin with the abovementioned considerations and others you may have listed.

In your country, do you experience or foresee any phasing issues that will limit the effectiveness of interventions in VCD programmes? For instance, is it necessary to build institutional capabilities for enforcing quality standards before such standards are introduced?

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