

Policy Dialogue

The role of governments in developing agriculture value chains

2019



| Background paper

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Acronyms and abbreviations

ACET	African Centre for Economic Transformation	MCA	multi-criteria analysis
CAADP	Comprehensive Africa Agriculture Development Programme	MoA	ministry of agriculture
CABRI	Collaborative Africa Budget Reform Initiative	MoF	ministry of finance
CBA	cost-benefit analysis	MoP	ministry of planning
FAO	Food and Agriculture Organisation	PFM	public financial management
IFAD	International Fund for Agricultural Development	SWOT	strengths, weaknesses, opportunities and threats
IFPRI	International Food Policy Research Institute	VC	value chain
IRDP	integrated rural development programme	VCA	value-chain approach
MAFAP	Monitoring and Analysing Food and Agricultural Policies	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



1.1 The Dialogue

The Collaborative Africa Budget Reform Initiative (CABRI) works with governments to help deliver more functional public financial management (PFM) reforms. One of CABRI's key activities is to facilitate peer learning and exchange through themed dialogues. One of the key themes of the dialogues is the improvement of the value for money delivered by public expenditure, including in agriculture, education, health and water and sanitation. Past dialogues in the agricultural sector include one in 2013 on efficiency of spending, and a second, in 2014, on impact evaluation. A third dialogue on agriculture will be held in Addis Ababa in March 2019, with a focus on the value added that can be derived by taking a value-chain approach (VCA) to policy and expenditure.

Objectives of the Dialogue. The objectives of the upcoming agricultural dialogue are to provide insights into the latest experience with using a VCA to improve agricultural policy and to identify capability constraints and possible action to resolve these, to facilitate dialogue between countries and to promote regional economic and environmental co-operation.

The policy dialogue will bring together officials from the ministries of finance and budget (MoFs), planning (MoP), agriculture (MoAs) and related line ministries (LMs)¹ to discuss the role and functions of the government in agricultural value-chain development (VCD). Government representatives will be given the opportunity to share their country's experiences, in an environment of peer learning and exchange.

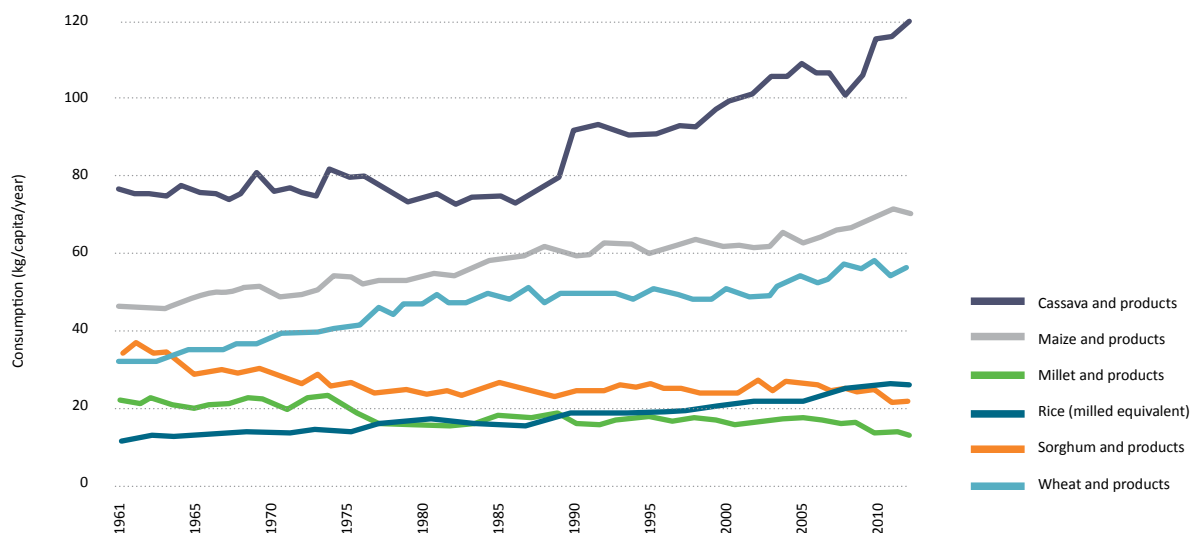
This background paper. This paper focuses specifically on how a VCA can improve the effectiveness of public policy in agriculture. It is not concerned with the general principles of agricultural planning and budgeting, which is a broader subject. The paper is based on a review of existing literature and the lessons from the three case studies undertaken for the dialogue.

1.2 Agriculture and African development

Demand. Conventional agricultural policy usually focuses primarily on production issues; a VCA, though, considers changes in demand to be equally important, and focuses on how the market ensures that demand is met by supply. However, data based on direct observation of consumption are limited to households surveys, which are occasional and difficult to compare across countries. Therefore, most estimates of consumption are derived from statistics of production plus imports minus exports. Figure 1 presents the average annual per capita consumption of six staple food crops across all African countries. The figure shows that there has been a strong increase in per capita consumption of all the staples combined. An increase in wheat and rice consumption is often associated with growing urbanisation, and the increase in maize can be partly attributed to the growing popularity of maize with farmers. The increase in cassava consumption is dramatic, and the reasons for it are not obvious. Consumption of sorghum and millet has declined slightly. Understanding the underlying reasons for trends and patterns in demand for crops is the starting point for introducing a VCA to agricultural policy, including both the integration of a VCA into routine policy and programmes and the conceptualisation of new programmes dedicated to VCD.

¹ Other ministries may include those of industry, trade, water and environment.

Figure 1: Average African per capita consumption of staple foods

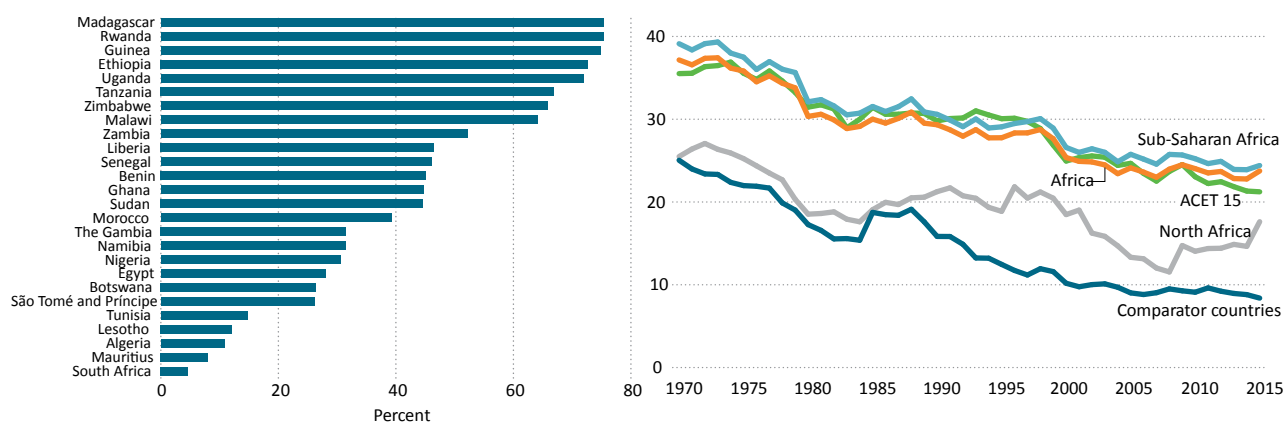


Source: FAOSTAT food balance data

Production. Agriculture employs 70 per cent of the labour force in low-income African countries, and more than 50 per cent in African lower-middle-income economies, although there are large variations in this figure between countries (see Figure 2). Agriculture features prominently in many economic plans, as a way of reducing poverty, malnutrition and gender differentials (NEPAD 2013). Early models of economic development, such as the Lewis Dual Economy model, expected industry and services to grow faster than agriculture, with improvements in agricultural productivity leading to the availability of surplus labour and profits from exports, to feed growth in industry and services. In Africa, agriculture has accounted for a gradually declining share of

GDP, as shown in Figure 2. The sector accounts for only 25 per cent of the GDP of sub-Saharan Africa, although the decline in agriculture’s share of GDP has slowed in the past 15 years. The early economic models of development are only partly relevant, as the supply of labour for growth in industry and services has come largely from growth in population, not in agricultural productivity. It is argued sometimes that agricultural multipliers are high and that growth in agriculture has high benefits in other sectors (Christiaensen, Demery & Kühl 2006). However, a search for studies of the difference in the multiplier effects of different sectors in Africa produced no results.

Figure 2: Agriculture share of GDP in Africa

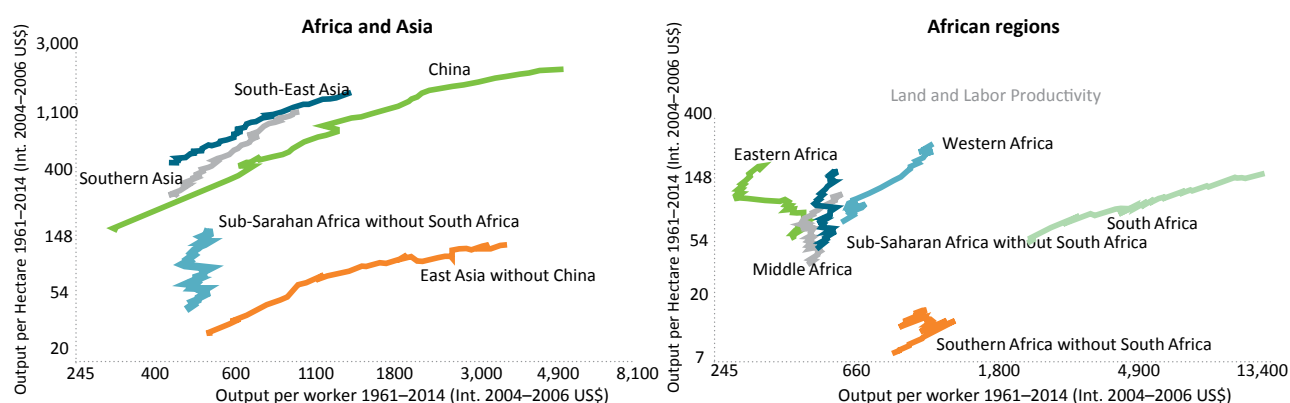


Source: ACET (2017)

Productivity. Productivity growth in sub-Saharan Africa is normally considered to be low when compared to growth in Asia. For example, Figure 3 shows changes in labour and land productivity in Africa and Asia over the past 43 years. Over the 2001–2012 period, total factor productivity² growth in sub-Saharan Africa averaged just 0.6 per cent per annum, while it averaged 2.9 per cent in East Asia and the Pacific and 2 per cent in South Asia, Latin America and the Caribbean (World Bank 2016). The increase in productivity in sub-Saharan Africa has happened mostly through increases in land productivity, while labour productivity has not changed significantly, except in South Africa and, to a lesser extent,

West Africa. This is in marked contrast to other developing countries, where there has been progress in both land and labour productivity. These figures are based on FAOSTAT data for agricultural production, divided by the total employment in the agriculture sector. However, other research suggests that many rural households have multiple tasks and the productivity of farm labour when calculated on the basis of the hours spent on agriculture is comparable with other sectors (McCullough 2015). Improving the understanding of returns to labour is central to a VCA in the sector.

Figure 3: Change in labour and land productivity, 1961–2014



Source: AGRA (2017) using FAOSTAT

Growth in productivity has not kept pace with population growth and changing consumption habits partly driven by growing urbanisation and changes in income (World Bank 2015). As a result, since the mid-1970s, Africa has been a net food importer (FAO 2011), a trend that is expected to continue over the 2015–2025 period as net food imports are projected to increase substantially from USD35 billion to USD110 billion (AfDB 2016). The reliance of Africa on imported staple foods poses a risk to food security, which is greatly affected during periods of high international food prices.

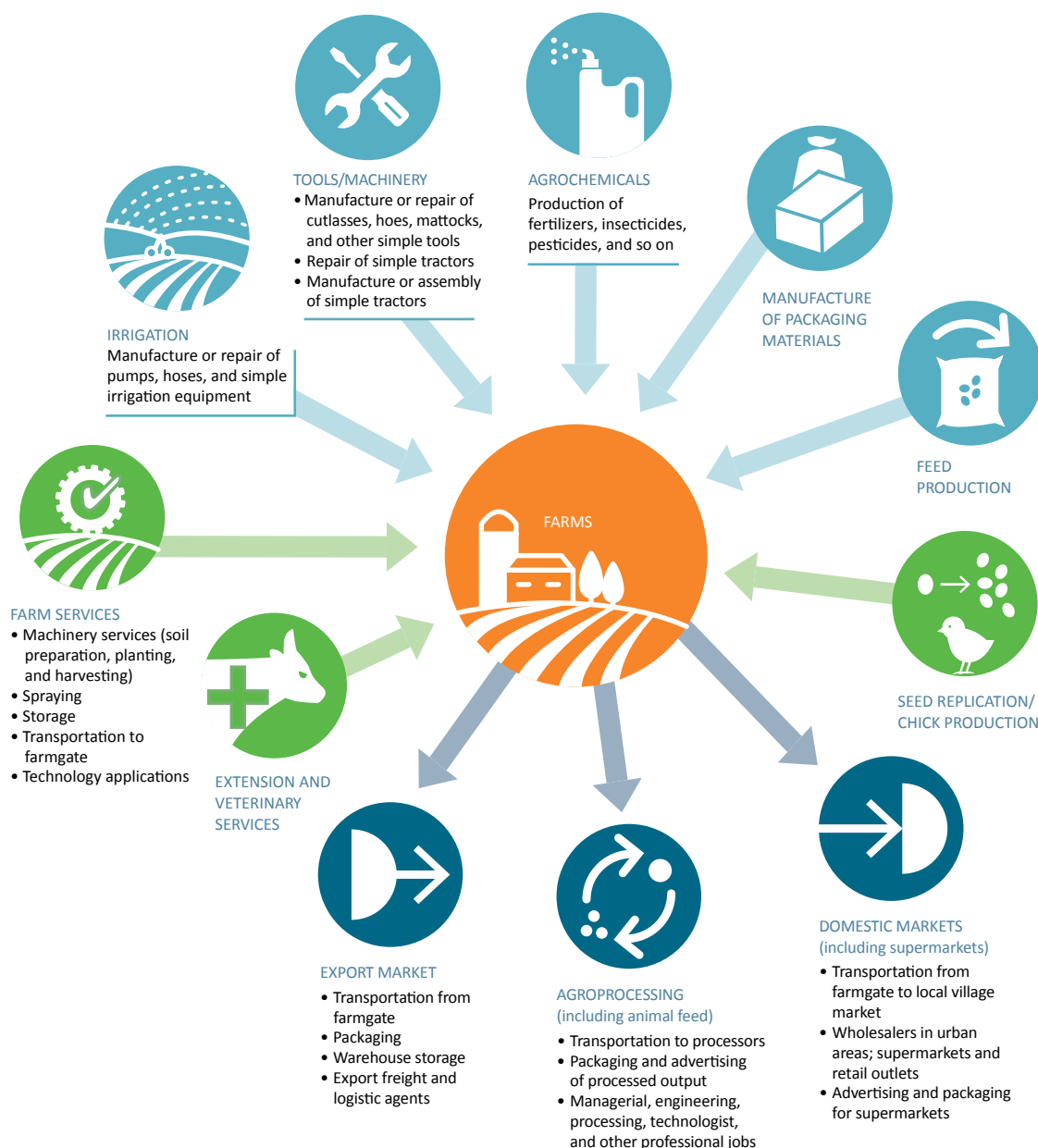
Some of the reasons for low levels of productivity include the use of labour-intensive traditional techniques that do not utilise modern technology, as well as high levels of underemployment. 80% of all farms in Africa are smaller than two hectares (NEPAD 2013). Most production is by smallholder farmers using traditional rain-fed farming methods. Fragmented smallholder producers in isolated villages face additional challenges in terms of organising themselves into associations and other commercial groups, accessing quality input supplies and market information, and transporting their perishable produce to markets. Climate change has posed an additional challenge, by making the

sector more vulnerable to weather shocks through changing rainfall patterns, increasing temperatures and extreme weather events such as floods and droughts (Sanderson, Hemming & Betts 2011).

Processing and marketing. Despite the challenges facing agriculture, most economic strategies recognise that sustained development must be based, to some extent, on growth of agriculture. Many point out that the linkages between agriculture and other sectors of the economy are strong and, consequently, sustained development is always going to have to be linked to agriculture. The African Centre for Economic Transformation (ACET) points out the strong linkages between agriculture and other sectors, as illustrated in Figure 4, and concludes that agriculture has a role in powering Africa’s economic transformation (ACET 2017).

² Total factor productivity takes into account all the contributions of conventional inputs to production, i.e. land, labour, capital and materials (World Bank 2016).

Figure 4: Linkages between agriculture and other sectors



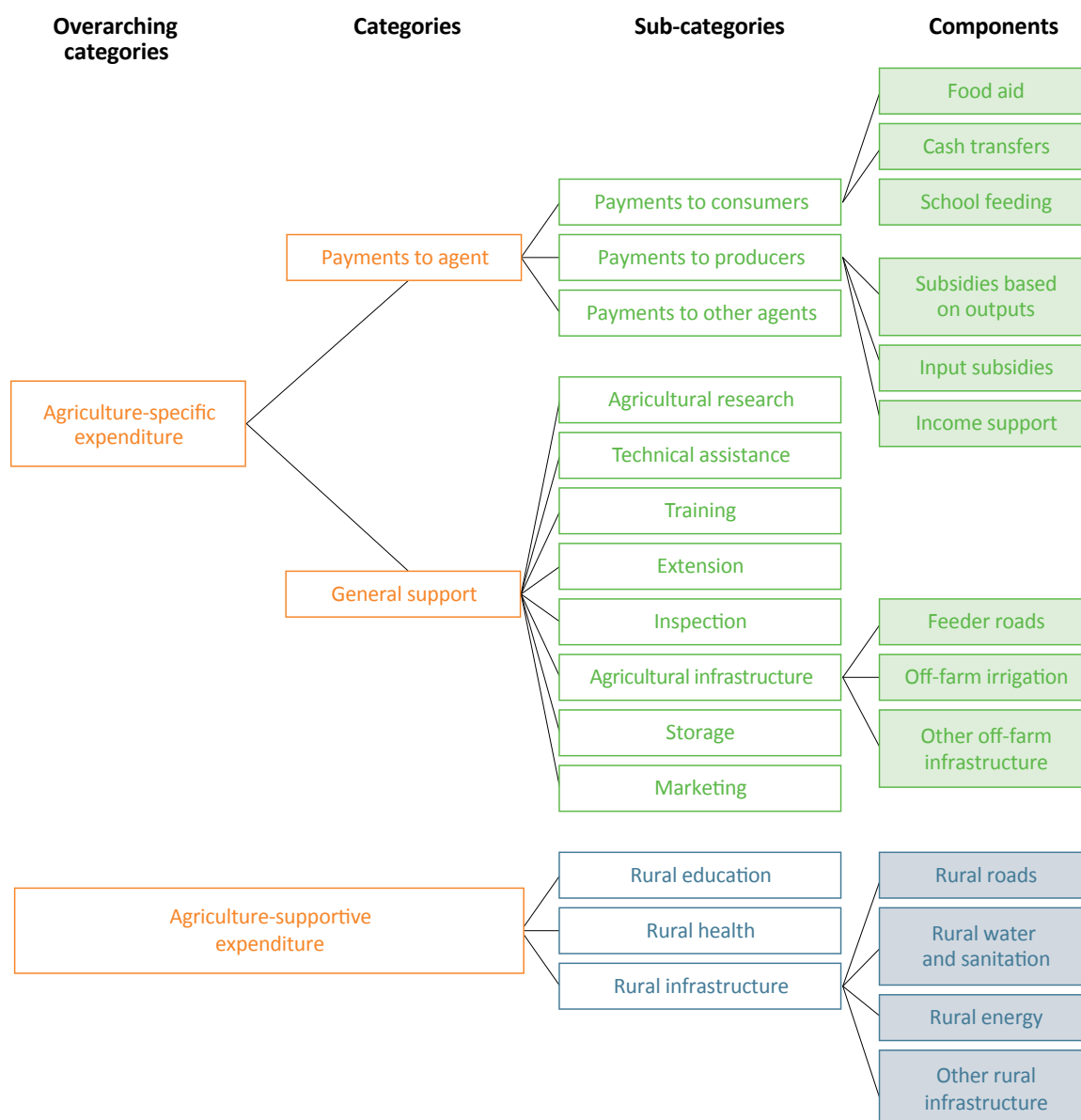
Source: ACET (2017)

1.3 Approaches to agricultural policy

Policy types. The Monitoring and Analysing Food and Agricultural Policies (MAFAP) project of the Food and

Agriculture Organisation (FAO) defines three broad categories of public expenditure in agriculture and 14 sub-categories, as shown in Figure 5 (Pernechele, Balie & Ghins 2018). Some of the sub-categories are broken down into more detailed components.

Figure 5: Agriculture public expenditure categories as defined by MAFAP



Source: Pernechele et al. (2018)

Role of government. Since the 1980s debt crisis and subsequent reforms, the main theoretical role of the state has been limited largely to the provision of public goods and the creation of a conducive business environment for the private sector to flourish (World Bank 2015). The underperformance of the agricultural sector has exposed the absence of certain markets and the presence of market failures (FAO 2006). The role of the state in reducing market

inefficiency and failures, and to counter the increase in inequality resulting from the market distribution of goods and services, is now acknowledged (World Bank 2016).³

Levels of expenditure. The renewed interest in agriculture resulted in 41 African governments signing the Maputo Declaration in 2003 and publishing the Comprehensive Africa Agriculture Development Programme (CAADP), as part of the New Partnership for Africa’s Development (NEPAD). The

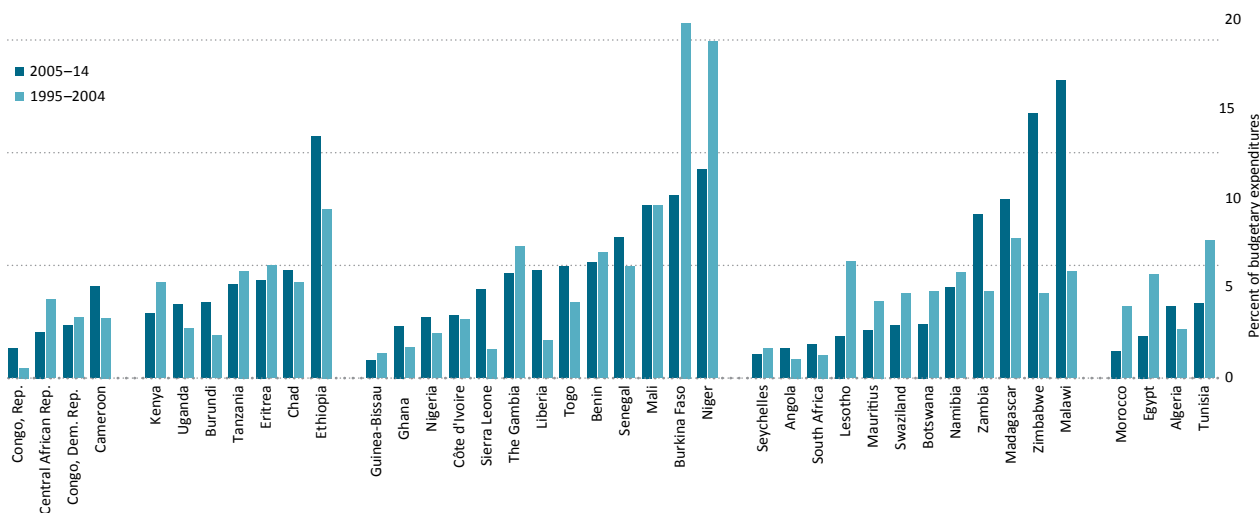
3 Previous state interventions in the agricultural sector emphasised on-farm production, through the provision of extension services and various production inputs. The results, however, were disappointing – this approach led to very high levels of inefficiency.

Malabo Commitment was made in 2014 and provides a policy framework for agricultural transformation, economic growth and prosperity for all (UN 2018).

The CAADP calls for increased investment in the agriculture sector to achieve the sector growth rate target of 6 per cent per annum. Governments across Africa have committed to allocating 10 per cent of their expenditure to the agriculture sector (NEPAD 2018), but few countries have achieved that level. Figure 6 shows the share of agriculture in total public

spending for the ten years before and after the Maputo Declaration. The figure shows that the share increased in 20 of the 40 countries, and decreased in the other 20 countries, suggesting that the Maputo Declaration had limited impact in allocative decisions for the agriculture sector. Three countries (Malawi, Zimbabwe and Zambia) had particularly significant increases and two (Burkina Faso and Niger) had large decreases.

Figure 6: Agriculture spending share in total public spending before and after 2003



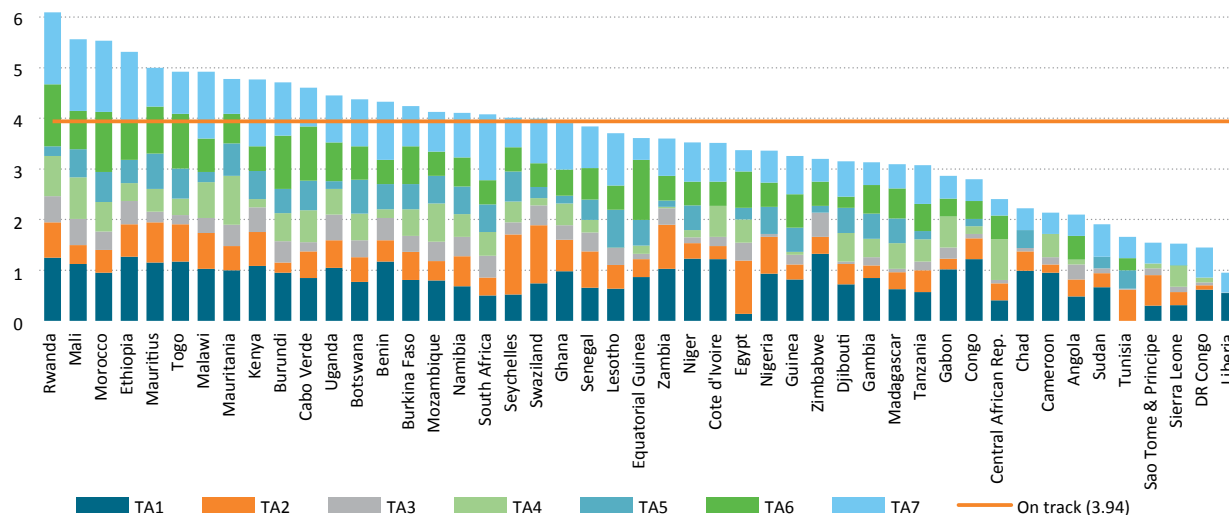
Source: ACET (2017)

Planning and budget processes. In addition to low levels of funding, there is the variance in budget preparation and execution capacity amongst countries. Although all sub-Saharan African countries have national agriculture investment frameworks, corresponding spending priorities are not captured in the budget process. This is combined with poor budget execution rates, which are as low as 34 per cent in the Democratic Republic of Congo and 37 per cent in Madagascar (World Bank 2016). Problems with budget execution are particularly serious in agriculture because of the seasonal nature of much expenditure and the fact that cropping seasons often do not coincide with budget cycles, and the high level of uncertainty in the agricultural sector, relating to both production and prices.

Improvements in the budget process would provide opportunities for greater efficiency in public spending. The CAADP recognises that public funds and existing skills are insufficient to meet the investment requirements for agricultural transformation, making collaboration with the private sector imperative for success (AfDB 2016).

Lessons learnt from agricultural policies. The International Food Policy Research Institute publishes an annual Global Food Policy Report (see IFPRI 2018). The latest edition of this report ascribes the strong agricultural growth to investment, especially foreign direct investment (FDI), encouraged initially by favourable commodity prices in the early 2000s. Public agricultural expenditure as a share of total expenditure has fallen from 3.5 per cent to 3.0 per cent, for the continent as a whole. The 2014 Malabo Declaration included a commitment to report on agricultural transformation, and defined the new African Agricultural Transformation Scorecard (AATS), which was launched at the January 2018 African Union Summit. The AATS is based on 43 indicators in 23 performance categories and 7 thematic areas. The results suggested that 20 out of 47 countries have an AATS score of at least 3.9, which indicates that these countries are on target to achieve their Malabo commitments (see Figure 7). Many countries have also been developing new investment plans for agriculture and food security, to replace those prepared for the 2003 Maputo Declaration.

Figure 7: African agriculture transformation score by country



Source: Benin, Ulimwengu & Tefera (2018)

The AfDB recently produced a review of the effectiveness of development assistance for agriculture, with a particular focus on the bank’s own activities (AfDB 2016). The review concluded that there is now good policy recognition amongst African governments of the importance of agriculture, but that productivity still faces constraints, including vulnerability

to unstable world prices and natural resource stresses. The AfDB maintains the view that conventional programmes to support farm productivity produce good results. However, it is also now focusing more on progress with value chains and with the growth of small business and rural infrastructure.

Box 1: Lessons from integrated rural development programmes

There was a strong focus on agriculture in the first two decades after independence in many Africa countries. Many of these projects has limited success, often because they addressed very specific single issues. In response to this, the 1970s and 1980s saw a rise in integrated rural development programmes (IRDPs) that aimed to cover all aspects of rural development. An evaluation of IRDPs found that most had performed significantly worse than expected for the following reasons: inhospitable economic situations, including poor farm-gate prices; insufficient knowledge of cropping systems and over-optimistic yield assumptions; low wages for farm labour; inefficient marketing; unsustainable extension costs; overloading of management by including all components under one managerial structure; and over-reliance on new institutions (DFID 2004). These lessons are highly relevant to the design of policy and investment based on the VCA.

An ACET background paper for the 2017 Africa Transformation Report identified seven reasons for the poor performance of IRDPs: design issues; project complexity; macroeconomic and political environment; beneficiary participation; project management units; development agency staffing; and inadequate understanding of farming systems (Baah-Dwomoh 2016). Surprisingly, given the perspectives of ACET, the paper does not focus strongly on VCD, although it does refer to some initiatives that adopt a VCA. However, some of the conclusions do appear to be similar to those found in the VCA evaluations (e.g. on complexity and macroeconomic policy), which suggests that VCA design work should be aware of the experience with IRDPs and avoid making the same mistakes.

More recently, an Institute for Development Studies bulletin has focuses on evaluation methods for integrated rural development, looking back over four decades (IDS 2018)&_”. The Bulletin concludes that it is very difficult to evaluate whether an integrated approach really makes any difference to the performance of public policy and investment, largely because the real world is so complex and messy that it is impossible to isolate specifically the implications of designing rural development in an integrated manner. The main lessons are on evaluation methods, and suggest that integration should not necessarily be designed to be comprehensive – it might be most effective if it focuses on only a few related initiatives, with monitoring and evaluation carefully linked to management.

There are many evaluations of specific IRDPs that illustrate the range of different experiences. For example, an evaluation of IRDPs across India found good levels of benefits but also highlighted frequent serious constraints with management and financing, as well as a tendency to focus on credit and extension, with insufficient attention to input supplies, crop marketing and infrastructure needs (PEO n.d.).

2

What is different about a value-chain approach?



Focusing on demand. Most agricultural strategies focus on the role of agriculture in delivering GDP and employment. In contrast, a VCA approach starts from the demand for agricultural products, and its role in providing improved nutrition and export earnings, and aims to understand how agricultural production meets this demand. At the same time, it aims to capture the potential benefits to all actors in the supply chain and, thus, to ensure that no actors block the development of the chain and that the limited public support that is available is devoted optimally through the chain.

Covering all actors in the chain. The VCA applies a market system perspective, from input suppliers to the end user, taking into consideration that related constraints may apply within the market system or the environment in which it operates (USAID 2018). An example of a value chain map is shown in Figure 9 (in section 6). By identifying the different activities that add value to a product, a VCA facilitates a better understanding of the constraints and opportunities for each activity by highlighting associated economic costs, important actors and the institutional framework (UNIDO 2009).

Complementarity with conventional sector planning. The VCA provides focused and balanced support for selected products through the whole chain. It, therefore, requires collaboration amongst those institutions that support agricultural production and those that support market development. The focus on selected products inevitably means that other products receive a reduced level of support. However, it is rarely appropriate to focus the large majority of public support on only a few products; a significant share of support for agriculture and agribusiness needs to be available for all products, allowing new ones to emerge for potential VCA focus.

Constraints and opportunities in the value chain. Many VCD programmes are designed to respond to constraints in the VC, which vary greatly by country and by VC, as illustrated in Table 1. However, a VCA is most suitable in supporting emerging opportunities, because of changing demand or new supply options. Thus, a VCA is well-suited to SWOT (strengths, weaknesses, opportunities and threats) analysis, which is found in many VCD programmes.



A VCA approach starts from the demand for agricultural products, and its role in providing improved nutrition and export earnings, and aims to understand how agricultural production meets this demand.

Table 1: Key constraints to value chains in Africa

Constraint	Rice: Ghana and Senegal	Maize: Zambia	Cocoa: Ghana	Dairy: Kenya	Green beans: Kenya
Output markets					
Policies distorting markets	*	***	*	**	
Quality issues	**		*	**	***
Food safety		*	*	**	***
Social and environmental issues			**		***
Regional integration issues	**	***		**	
Price risk	**	***	**	*	*
Inputs and technology					
Policies distorting markets	**	***	*	*	
Access issues	***	***	***	*	
Land access issues	***	**	**		
Infrastructure issues					
Transport	**	**	**	*	
Other	*** (irrigation)	** (rural roads)	* (energy for grinding)	* (collection points)	* (cold chain)
Access to finance issues	**	**	***	*	
Skill issues	*	*	**	*	***
Issues with engaging smallholders				*	***

Source: World Bank (2013)

3

How a value-chain approach affects policy options



Role of government in VCD. Section 1.3 above considered the role of government in agriculture. Adopting a VCA has the following implications for each area of potential government support.

- **Research and extension** are central to conventional agricultural policy and are normally an essential part of VCD programmes. However, a VCA focuses not only on maximising production and yields, but also on the quality and seasonality of production, which affects the ability of farmers to get products to markets, either for consumers or agribusiness. A VCA also encourages research and extension to focus on the use of inputs that are likely to be available to farmers, given the capacity of input suppliers. It will also ensure that attention is provided to post-harvest activities by farmers and other actors.
- **Market information services** are sometimes included in conventional agricultural policy, often as standalone activities that concentrate on providing farmers with information on crop prices. In a VCA approach, the information services may be extended to include a variety of business services including linking farmers and associations with traders and processors, business services, public support for mediation, awareness of the benefits of more secure VCs and marketing campaigns to influence demand.
- **Market intervention** is becoming less common in Africa as markets mature and there are more actors and more efficient markets. However, there may still be justification for some intervention for some products in some countries, where specific markets are still poorly developed. This can take the form of direct intervention (e.g. in purchasing for strategic food reserves) or regulations to set price floors or ceilings or guide prices to influence markets. Market intervention requires careful consideration of whether it encourages, rather than undercuts, the emergence of private and co-operative actors in the market, in order to improve choice and efficiency. A VCA adds rigour to this by requiring a strong analysis of the implications of market intervention for all actors in the chain, including an understanding of the factors that determine profitability.
- **Quality controls** (including food safety and input standards) are sometimes neglected in conventional

support for agriculture; VCA ensures that support is provided if this is necessary for an efficient value chain that meets the quality demands of consumers and processors and provides incentives to farmers.

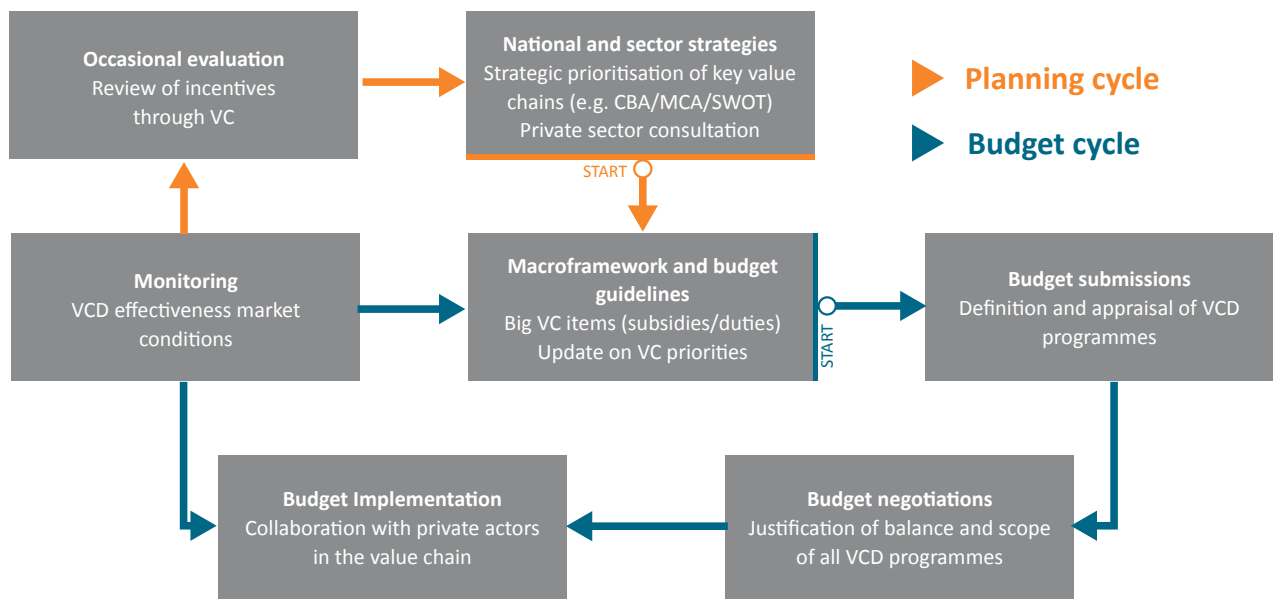
- **Public infrastructure** is often a key feature of public support for agriculture. It is also important when using a VCA, which ensures that investment in transport and market infrastructure is not neglected in favour of other standard large investment items, like irrigation and drainage.
- **Enterprise development** 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 responsible for trade and industry.
- **Trade policies** may also feature in VCD programmes. Collaborative councils can have powerful lobbying roles to influence high-level trade negotiations, and VCD programmes may engage directly with improving the operation of detailed trade procedures (e.g. customs procedures, mutual recognition, harmonisation of standards and regional trade facilitation). Collaboration between the institutions involved is rare but important (UNECA 2009; FAO 2018).

The planning cycle. The key points in which a VCA can improve planning activities are the following.

- **Agricultural strategy documents** can use a VCA to make sure that all potential constraints to development are addressed and to help guide effective collaboration between ministries, including those responsible for agriculture, trade, industry and fiscal policy. They can also include strategic long-term prioritisation of value chains using a structured approach, such as economic, multi-criteria and/or SWOT analysis.
- **Programme preparation and appraisal** can use a VCA to improve the sustainability of interventions by ensuring that the incentives of all actors in the chain are taken into account, thereby reducing the risk of one actor blocking the progress of the others.

- In **budget negotiations**, ministries responsible for agriculture, trade and industry can justify their selection of priority VCs and the selection of priority policies within each VCD programme.
- The **implementation** of VCD programmes is subject to routine budget implementation procedures, but may require additional measures (e.g. partially independent agencies) to accommodate private sector partnership.
- **Monitoring** activities can use a VCA to ensure that changes in market conditions, especially in demand, are responded to rapidly in the management and refinement of projects and policies.
- **The budget guidelines**, including the macroeconomic framework of the budget, can refer to the latest evidence from monitoring data for the potential growth of key VCs and the implications for large items of public expenditure (e.g. on subsidies or import duties).
- **Occasional evaluations** can use a VCA to help ensure that the evaluation is broad enough to cover all actors that may influence effectiveness, impact and sustainability.

Figure 8: Value-chain development in the planning and budgeting system



4

Advantages of a value-chain approach



The key advantages of a VCA are as follows.

- A VCA considers the demand for agricultural products and the benefits to consumers as well as producers.
- It focuses on all actors to ensure that key potential blockages are identified and addressed.
- The broad scope of a VCA also encourages it to address the potential role of the state in respect of all policies and investments.
- A VCA looks at the viability of all actors in the chain and often uses an analysis of economic and financial viability (including risk, demand, quality, price and trade issues) in addition to a more qualitative assessment. This is similar to analysis conducted by the private sector and, hence, facilitates PPPs and encourages co-operation with the private sector.

The Independent Development Evaluation (IDEV) of the AfDB recently conducted an evaluation of the bank's support for programmes that included agricultural VCs (AfDB 2018). The evaluation was based on: nine case studies; reviews of literature from policy, strategy and AfDB documents; and interviews with AfDB staff, government officials, development partners and private actors in the projects. It aimed to draw lessons from successes and challenges, with a particular interest in lessons for the bank's Feed Africa Strategy. The evaluation identified five fundamentals and five enablers that typically determine the success of policy that is based on the VCA. The fundamentals are:

1. ensure that the assessment covers the whole VC;
2. strategise support to ensure that it is as inclusive as possible, given limited resources;
3. include a strong focus on changing market conditions and how to respond to them;
4. ensure that all value addition through the chain is profitable; and
5. focus on the sustainability of impact.

The enablers are listed below. There is some overlap with the seven enablers listed by the AfDB in its Feed Africa strategy, which included some focus on productivity, production and inclusivity (AfDB 2016).

1. availability of appropriate infrastructure and ICT;
2. conducive policy and regulatory environment;
3. availability of business support services;
4. access to financial services; and
5. strong private sector participation.

The findings from the AfDB experience suggest that, while a VCA does feature in many projects, the way in which projects accommodate the VCA is quite varied and there is a need for greater focus on markets and profitability. The evaluation also considered the way a VCA achieved equity and inclusivity and concluded that, while many projects included activities to ensure participation by youth, women and other vulnerable groups, there was less focus on whether that participation leads to sustainable results for these groups.

5

Challenges of a value-chain approach



Key challenges. The main challenges involved in taking a VCA to agricultural sector development areas are as follows.

- A focus on priority VCs means that there are **fewer resources for non-priority VCs**. There are no standard methods for determining the right proportion of total agricultural expenditure that should be devoted to VCD programmes, as compared to routine sector-wide programmes.
- Building markets is a mid- to long-term task, but market conditions can be unpredictable and change rapidly from year to year. Distinguishing between temporary changes and longer-term trends **requires capacity and experience, and needs to be matched by flexible decision-making** on whether the emphasis should be switched between priority VCs.
- Designing a VCD programme requires a review of all constraints and opportunities in a VC, and all the intervention options (i.e. policy and investment) for responding to these. It is tempting to try to cover many policies, but experience suggests that VCD programmes become bogged down with **management complexity** if they attempt to manage more than a few interventions at once.
- A VCD programme usually requires strong partnership between the public and private sectors. This can be challenging because the private sector uses **management and decision-making** practices that are difficult to match in the public sector, given the need for checks and balances in public procedures. The public and private sectors also have different practices for assessing the performance of expenditure, with the private sector focusing on detailed financial analysis and the public sector focusing more on wider benefits.
- Adopting a VCA does not automatically mean that a development initiative will be more or less supportive of **poverty reduction**. However, VCAs tend to include a focus on market development, and key players in the market are often amongst the more wealthy in society. The implicit thinking behind a VCA is that allowing some benefits to be accrued to relatively wealthy market actors is worthwhile if poorer actors (e.g. small farmers and labourers) are to experience sustained development, and that the use of a VCA can help to ensure that the poorer actors receive as large a share of the value added through the chain as possible.
- The impact on **gender and youth** of a VCA warrants special attention. In many countries, enterprise ownership is dominated by men, although there are examples in agribusiness of women receiving a larger share of employment benefits than do men. For example, the Centre for Public Impact (CPI) evaluation of ACI activities reports that 73 per cent of employment created in cashew processing was for women (CPI 2017; GIZ 2017).

6 Value-chain approach methods



The World Bank review of competitiveness in the Africa's food value chain identified the following 12 issues that need to be considered in a VCA (Webber & Labaste 2010):

1. choosing priority sectors;
2. designing informed strategies;
3. designing benchmark and gap assessments;
4. upgrading and deepening the VC;
5. identifying business models for replication;
6. capturing value through forward and backward integration;
7. horizontal collaboration and economics of scale;
8. positioning for value and competitiveness;
9. identifying required support;
10. improving the environment for public-private dialogue;
11. synergies from clustering; and
12. monitoring value-chain performance.

Selecting VCs. In theory, it should be possible to require support for all agricultural products to adopt a VCA. In practice, a VCA is often introduced by starting with one or two products, especially when the VCA is used as part of a project, rather than a sectoral programme. A recent **International Fund for Agricultural Development (IFAD)** assessment of the VCA suggested that, even if projects had to keep a clear focus on a few products, there would be advantages in applying the VCA to several products to allow projects to switch levels of support between crops, should market conditions change (IFAD 2014). Such an approach would be similar to that used by private sector actors when monitoring the potential profitability of different crops and enterprises.

The priority products are typically selected using techniques that mix: (i) economic and financial analysis; and (ii) multi-criteria analysis (MCA).

Economic analysis for a VCA can use any economic appraisal method and simply apply it to all actors in the chain. Methods can include financial appraisal, to assess the profitability of

each actor, and cost-benefit analysis (CBA), which includes wider costs and benefits to society that may not be captured by the market prices used for financial appraisal. It may also include analysis of beneficiary incidence, such as poverty and social impact assessment to assess the differential impact on target groups, such as the poor, women, youth or ethnic minorities. It is, therefore, a specific approach to applying CBA rather than a different approach altogether (IFAD 2016).

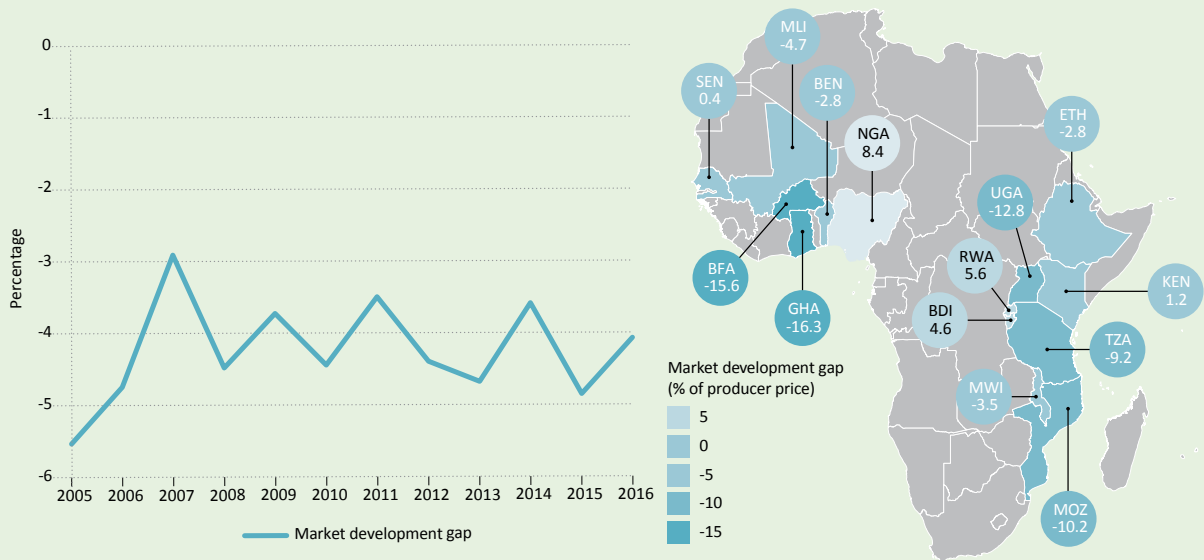
MCA defines a number of criteria and then adopts a semi-structured assessment that aims to give consistent scores to each. The scores are then totalled to get a combined score. Weights may be applied to the criteria, depending on countries' development priorities, to get a weighted overall score. One commonly used system is the 5Es (i.e. economy, efficiency, effectiveness, equity and ethics/environment, which may also be extended to include efficacy). The key to effective MCA is that the scores are assessed in a consistent manner across all options, which requires either one co-ordinating individual or very clear and structured guidance on how to assess scores. Other MCA methods that can be useful for VCA include the policy assessment matrix and SWOT analysis (Coulibaly et al. 2010).

IFAD recommends a multi-criteria approach to selecting VCs using five criteria related to VC growth potential (market demand, competitive advantage, potential for technical change, infrastructure and inputs, and natural resource constraints), and six related to development/poverty alleviation potential (current target group participation, barriers to entry, potential for improve distribution of benefits along the VC, income generation potential, potential for improved resilience, and cultural/social constraints) (IFAD 2014).

Another methodology is that used by the FAO's MAFAP project – the market development gap (MDG), which measures the level of excessive market access costs, expressed as a percentage of the farm-gate price. The excessive market costs relate to those arising from poor infrastructure, high agribusiness costs, taxes and fees, excessive profit margins and informal costs, such as bribes.

Box 2: MAFAP analysis of MDG in Africa

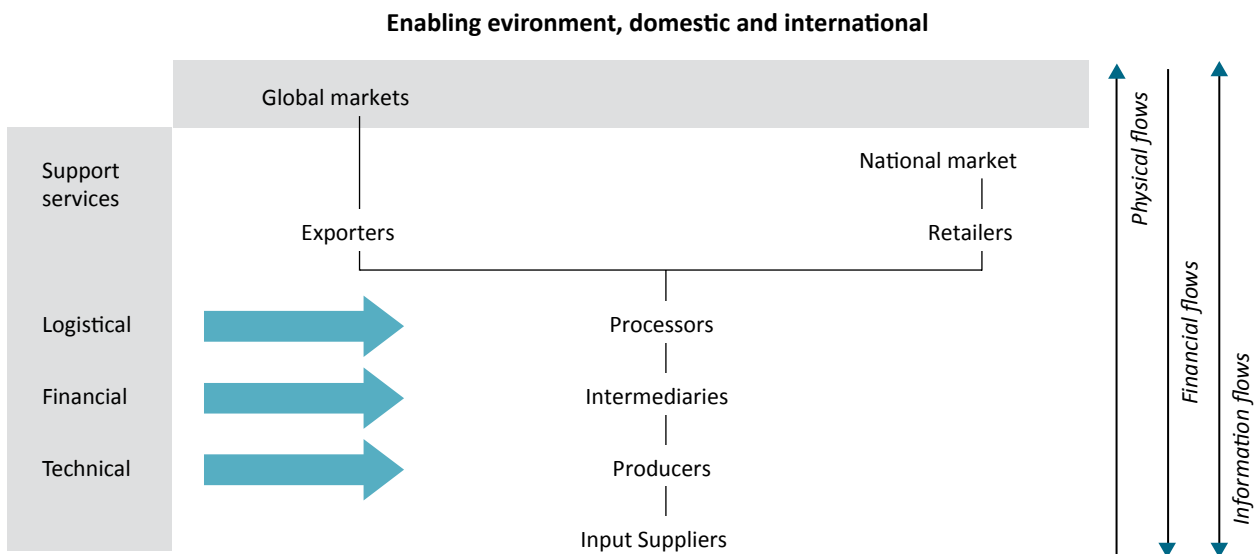
MAFAP has worked with 12 African countries, with a particular focus on maize, rice, cotton, coffee, cassava, groundnuts, sorghum and tea. Results of the MDG analysis, presented in the figure below left, suggest that the level of excessive market costs has been relatively constant between 2005 and 2016 and is normally between 3 and 5 per cent of the farm-gate price, which is small. The figure below right also shows that there are very large variations between countries, with particularly high levels of excessive market costs in Ghana, Burkina Faso, Uganda, Mozambique and Tanzania. Three countries (Nigeria, Rwanda and Burundi) have significantly positive MDGs arising from levels of public support for key elements of the market.



The VC map. The starting point for a VCA is to have a clear VC map. This can begin with a simple flow diagram linking the main actors (i.e. input supply, farmer, trader, processor,

retailer and consumer). Ideally, it can then extend to disaggregating some of the key actors and adding supporting actors, including financial services.

Figure 9: Typical value-chain map

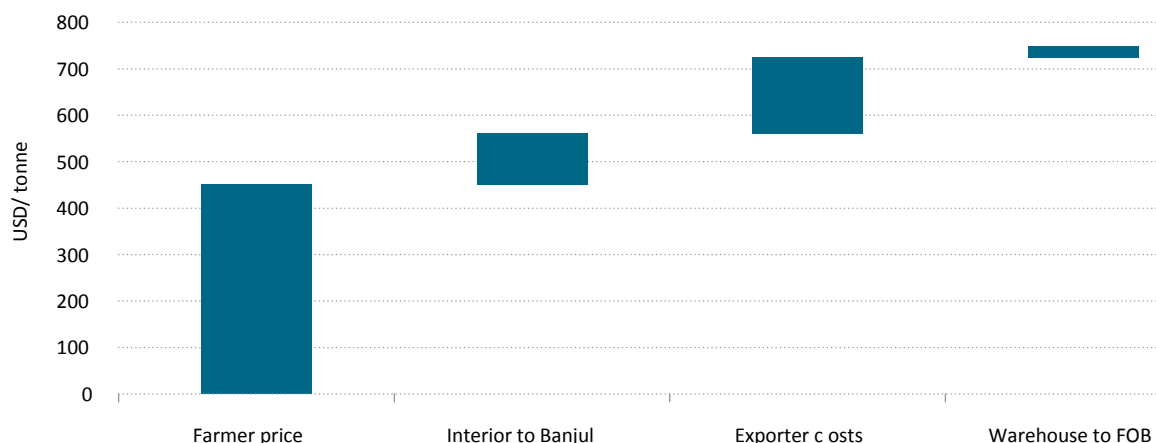


Source: Jaffee, Siegel & Andrews (2010)

Value added in the VC. Theoretically, a VCA assesses value added for all actors in the chain, including returns to labour (to ensure that people will have the incentives to participate) and returns to capital (to ensure that investment will be sustained). In practice, it is difficult to find clear assessments of the value added through the chain. Figure 10 presents a very basic value added analysis for the cashew export chain in

Senegal and The Gambia, but considers only the prices paid through the chain and does not deduct the costs of inputs to estimate the value added. Ideally, the value added through the chain should be assessed over time, and is best presented as a stacked bar chart showing how changes in yield and prices over the years affects the distribution of value added amongst the actors in the chain.

Figure 10: Prices in the cashew value chain in Senegal and The Gambia



Source: Peters, Jaeger & Gomez (2011)

A more advanced version of a value chain analysis is presented in Figure 11. In theory, it would be possible to combine this analysis with a conventional map and make the boxes in the map proportional to revenue (on the horizontal) and margins (on the vertical) and still retain the information about the linkages between the actors. It would even be possible to include solid boxes for the current situation and dashed lines to show resized boxes for the potential situation after reforms have been successful. This is never done, however, perhaps because there are many actors that have little or no revenue and/or margins, but which are still critical for the VC. A more practical option for including value added in the VC map is simply to add the numbers to the boxes in the VC map.

Risk. A VCA can be based on models of typical profitability for all actors in average years. However, it must also take into account the uncertainties affecting production and markets, and how all actors expect to survive these risks. The World Bank has produced a framework for rapid methods of incorporating risk into a VCA (Jaffee et al. 2010).

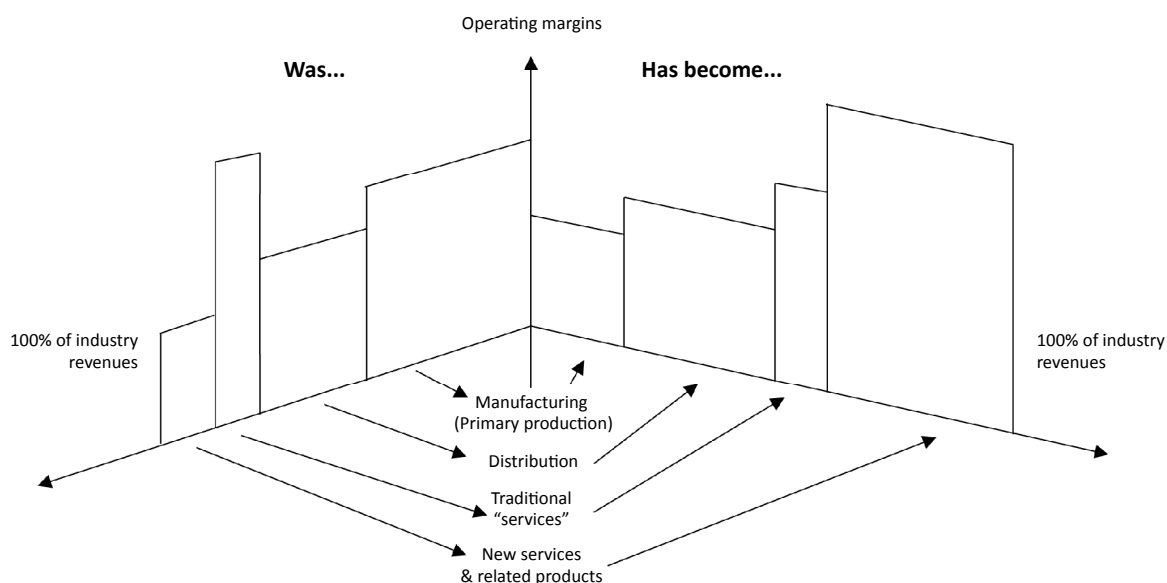
Multiplier effects. Sometimes, it is argued that a VCA facilitates and encourages the identification of multiplier effects. There is a convention in applied economics that multiplier effects are best analysed in the context of detailed research activities and should not be used in applied policy analysis to claim additional benefits for public intervention. This convention does not deny that multiplier effects are important and should be analysed, but it is based on the experience that it is difficult to ensure the comparability of the data and methods used for assessing multiplier effects for different interventions. Consequently, there are risks that interventions that claim higher than average multiplier

benefits may be basing this on differences in method and data, rather than on real differences.

The financial sector. A SWOT analysis for VCs often concludes that limited access to finance is a critical constraint. In most cases, this reflects a mixture of poor availability of financial services combined with questions about the profitability of market actors while markets are being built. Adopting a VCA requires an understanding of the profitability of all players in the VC. This is achieved using techniques of financial appraisal, which help to improve communication between the public and private sectors and with banks (GIZ 2011).

African experience with M4P. Making Markets Work for the Poor (M4P) is an initiative that takes a VCA and has been applied in many developing countries. The approach is a classic VCA but has a strong explicit focus on the impact on the poor. M4P includes a standard approach, and a recent evaluation of M4P in Nigeria concluded that many of the features of this approach are valid, including the importance of finance, the potential role of women, the need to build on existing institutions, the importance of market monitoring and the need to understand risks (Propcom Mai-karfi 2018). However, the Propcom Mai-karfi evaluation also concluded that it is often necessary to go beyond the normal M4P practices, if markets are very weak. Much work has been done on the methodology of M4P evaluation; for example, despite their comprehensive review, Ruffer & Wach (2013) identify only three projects in Africa (in Kenya, Nigeria and Zambia) and most of the evaluation effort was on method, rather than practice.

Figure 11: Revenues and margins for value-chain actors before and after reforms



Source: Buxton, Farr & MacCarthy (2005)

Box 3: Guides on VCA

Many organisations have produced guides on VCA and these can easily be found on the internet. This includes donor agencies (e.g. FAO, GIZ, IFAD, IFC, ILO, SDC, USAID and WB), agricultural research centres (e.g. CIAT, CIP, IITA and WAC) and NGOs (e.g. CRS, DIIS, IDRC, IIED and KIT). A review of literature by the World Bank identified 27 guides relating to VCA, many of which were written primarily for the private sector (see Webber & Labaste 2010). The World Bank review defines 5 main topics (trust, governance, market power, innovation/knowledge and intervention), and indicates that the topics most frequently covered by the guides were governance and market power.

The International Finance Corporation (IFC) Handbook is produced mainly for the ‘sustainability and sourcing managers of global brands, off-takers, input companies, service providers and banks’ and focuses on promoting effective collaboration between large companies and small farmers (IFC 2019). It also aims to be useful for government officials and NGOs. The handbook points out the advantages of smallholders in the supply not only of traditional export crops, but also of high-value horticulture and floriculture crops, which also benefit from the sort of ‘precise, labour-intensive tasks’ that smallholders are best placed to provide. The handbook points out the advantages for both agribusiness and smallholders of direct marketing between the two, not only to reduce the costs of marketing, but also to create opportunities for collaboration with new techniques, improving quality and building on the demand for fair trade and traceability. The collaboration also helps smallholders adapt quickly to changing markets, especially where these are associated with urbanisation. It may also help with mechanisation in response to reduced labour availability in rural areas. The key elements of the agribusiness VC may be listed as: inputs, farmers, processors, distributors and retailers, with the integrated supporting business of marketing, policy, infrastructure, PPPs, financial services, advisory services and ecosystem services, most of which operate in the chain between farmers and distributors. The handbook stresses the importance of considering ways of improving the profitability of all actors in the chain using both technical change and new business practices.

7 Lessons and questions about the African experience of value-chain development



VCAs have become a common feature of agricultural strategies, notably through agricultural transformation agendas (ATAs). This usually means that some public funding for the agriculture sector is switched from direct support for farmers to support for marketing and processing enterprises. This new support may be concentrated amongst a smaller number of households, who may not be amongst the poorest. ATAs argue that this provides indirect net benefits to small farmers because they benefit from greatly improved marketing options and, hence, improved prices and crop choices. **What criteria would you use when deciding the proportion of a VCD programme that should be devoted to marketing and processing?**

Experience with VCD suggests that it is useful to support several VCDs and to build flexibility into a programme, so that support can respond to the changing opportunities that emerge from changes in markets and policies. IFAD suggests focusing on five VCs at a time. **Is the IFAD suggestion appropriate in all circumstances? What could you consider when deciding on the number of VCD programmes in your country?**

The selection of VCs that are to be covered in a VCD programme requires a structured approach to ensure that it is rigorous and that the assumptions behind the selection feed clearly into the design of the programme. Few VCD programmes are designed with a sound analysis of markets and profitability of the sort that would normally be expected for private sector investment. **Should major African VCD programmes include more rigorous financial and economic analysis?**

A VCA requires an assessment of all policies that may affect all parts of the VC. However, experience with VCD programmes suggests that covering more than about three policies can dilute the focus of the programme and lead to blockages and ineffectiveness. Phasing the policies can be a useful method of covering several policies but focusing on a limited number at any one time. **How would you select and phase the different policies in VCD programmes?**

Direct market intervention has been problematic in Africa, except in some cases where processing and marketing are highly centralised, which mostly relate to export crops. **Are there methods of influencing price behaviour selectively that do not result in the market becoming dependent on public support?**

There is growing experience with new types of PPP which go beyond conventional approaches of shared equity. **What are the most promising areas of new PPP (e.g. collaboration in business services, public support for mediation, awareness of the benefits of more secure value chains and marketing campaigns to influence demand)?**

The broad and integrated nature of a VCA requires collaboration amongst a range of institutions. Some countries have established councils to provide co-ordination of a VCA as a mechanism for guiding an ATA. **However, these councils involve costs, especially in terms of the use of scarce skills and the risks of duplicated effort. Are there other ways of facilitating institutional co-ordination, especially bearing in mind the importance of including private sector representation?**

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