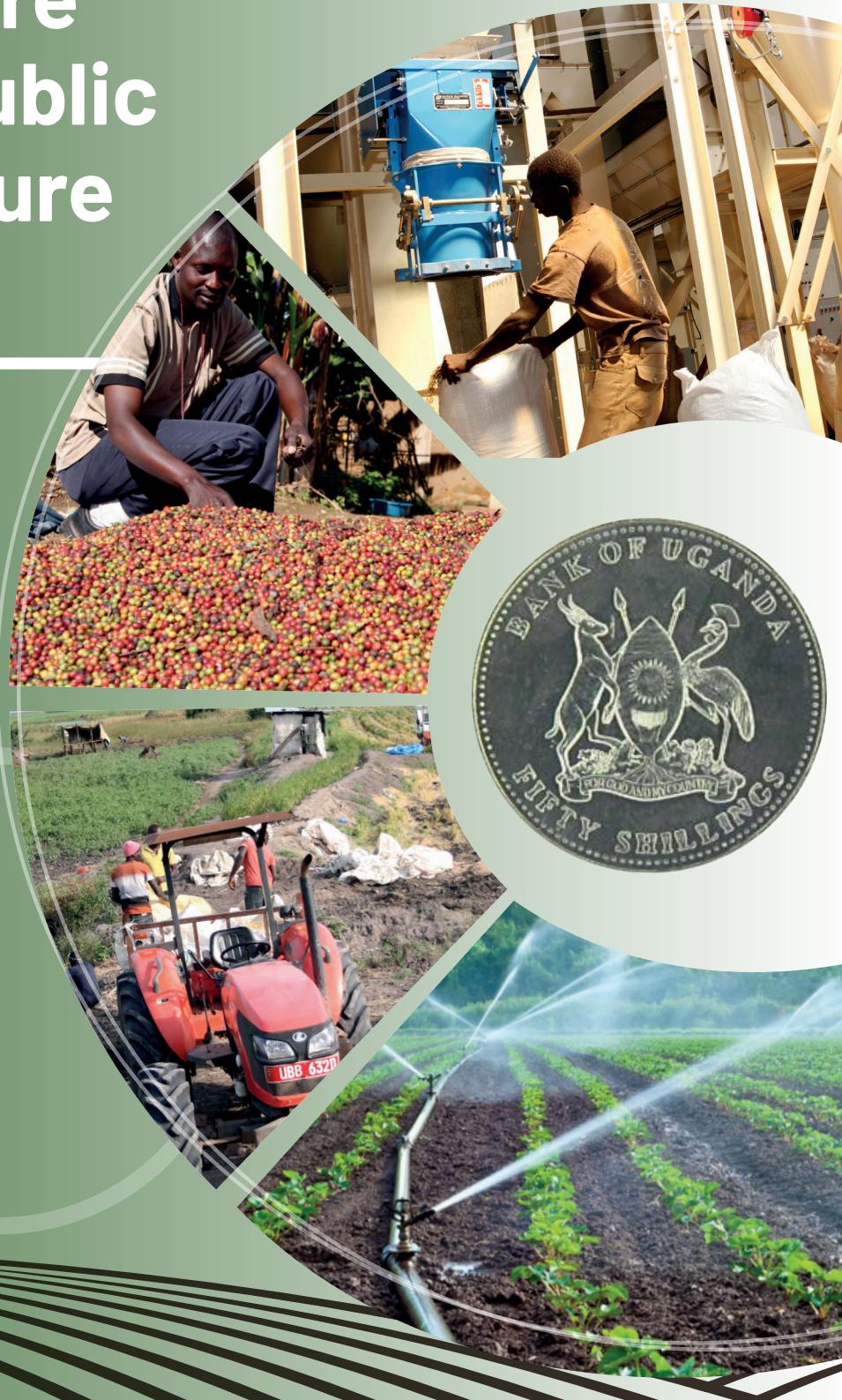


Republic of Uganda



WORLD BANK GROUP

# Agriculture Sector Public Expenditure Review



September 2019

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## **CURRENCY EQUIVALENT**

Exchange rate effective as of May 11, 2018

Currency unit	= Ugandan shilling (USh)
US\$1.00	= USh3,700

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This report was produced by a team from the World Bank Group, led by Ladisy Komba Chengula (Lead Agriculture Economist) and comprising Holger A. Kray (Lead Agriculture Economist), Kevin John Crockford (Sr. Rural Development Specialist), Joseph Oryokot (Sr. Agriculture Specialist), Irina Schuman (Sr. Agriculture Economist), Friederike Mikulcak (Jr. Professional Officer), Barbara Kasura Magezi Ndamira (Senior Public Sector Specialist), and Christopher Paul Jackson (Senior Public Sector Specialist). Agnes Yvonne Masaka (Team Assistant), with Janet Christine Atiang and Srilatha Shankar (Program Assistants), provided administrative and logistical support. A team of consultants led by Christian Derlagen and including Alban Mas Aparisi, Leopold Ghins, Paul Cathala, and Lucile Hummel undertook the expenditure analysis from the BOOST database. Other consultants included James Joughin (institutional analysis) and Charles Owuor (private sector analysis). Diego Arias Carballo (Lead Agriculture Economist), Michael Morris (Lead Agriculture Economist), Philip Schuler (Lead Economist), Elliot Mghenyi (Sr. Agriculture Economist), and Tihomir Stucka (Sr. Economist) contributed useful insights as peer reviewers, while Antony Thompson (Country Manager) provided additional guidance at various stages of the report's preparation. Dina Umali-Deininger (Practice Manager) provided oversight for the work.

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## ACRONYMS & ABBREVIATIONS

AgGDP	Agricultural Gross Domestic Product
AgSER	Agriculture Sector Expenditure Review
ARUD	Agriculture, Rural, and Urban Development Program
ASSP	Agriculture Sector Strategic Plan
AU	African Union
AUGN	African Union Guidance Note
BFP	Budget Framework Paper
CAADP	Comprehensive Africa Agriculture Development Programme
CBA	Commodity-based approach
CDO	Cotton Development Organization
COCTU	Coordinating Office for the Control of Trypanosomiasis in Uganda
COFOG	Classification of the Functions of Government
DDA	Dairy Development Authority
DFID	Department for International Development (United Kingdom)
DSIP	[Agriculture Sector] Development Strategy and Investment Plan
EAC	East African Community
GDP	Gross domestic product
GoU	Government of Uganda
ICT	Information and communication technology
IFAD	International Fund for Agricultural Development
IFMS	Integrated Financial Management System
IMF	International Monetary Fund
KSW	Kakira Sugar Works
MAFAP	Monitoring and Analyzing Food and Agricultural Policies
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries
MoFPED	Ministry of Finance, Planning, and Economic Development
MoLG	Ministry of Local Government
MoLHUD	Ministry of Lands, Housing, and Urban Development

MoPS	<b>Ministry of Public Services</b>
MTEF	<b>Medium-Term Expenditure Frameworks</b>
MWE	<b>Ministry of Water and Environment</b>
NAADS	<b>National Agricultural Advisory Services</b>
NAEP	<b>National Agricultural Extension Policy</b>
NAGRC&DB	<b>National Animal Genetic Resource Centre and Data Bank</b>
NAP	<b>National Agriculture Policy</b>
NARO	<b>National Agricultural Research Organization</b>
NBFP	<b>National Budget Framework Paper</b>
NDP	<b>National Development Plan</b>
NPA	<b>National Planning Authority</b>
OPUL	<b>Oil Palm Uganda Limited</b>
OWC	<b>Operation Wealth Creation</b>
PE	<b>Public expenditure</b>
PEAS	<b>Public expenditure in support of the agriculture sector</b>
PMA	<b>Plan for Modernization of Agriculture</b>
PPP	<b>Public-private partnership</b>
R&D	<b>Research and development</b>
SAGA	<b>Semi-autonomous government agency</b>
SSA	<b>Sub-Saharan Africa</b>
SWG	<b>Sector Working Group</b>
TFP	<b>Total factor productivity</b>
U-PACT	<b>Uganda Platform for Agricultural Coordination and Transformation</b>
UCDA	<b>Uganda Coffee Development Authority</b>
USAID	<b>United States Agency for International Development</b>
VAT	<b>Value added tax</b>
WHT	<b>Withholding tax</b>

# GLOSSARY OF KEY TERMS

<b>Allocative efficiency of public expenditures</b>	Analysis that permits one to understand priorities and balance of public expenditures. It consists of the analysis of economic and functional compositions
<b>Budget estimates</b>	Budget allocation approved by the Ugandan Parliament at the beginning of each fiscal year
<b>Capital expenditures</b>	Investments where the benefit continues over a long period rather than being exhausted in a short period. Such expenditure is of a non-recurring nature and results in acquisition of permanent assets
<b>Economic composition of public expenditures</b>	Assessment of balance between wages, non-wage recurrent, and capital expenditures
<b>Functional composition of public expenditures</b>	Assessment of allocation of public expenditures by main functions and alignment of this composition with policies, strategies, growth diagnostics, and other priorities
<b>Non-wage recurrent expenditures</b>	Recurrent expenditures less expenditure on wages, salaries, and supplements
<b>Recurrent expenditures</b>	Expenditure that does not result in the creation or acquisition of fixed assets. It consists mainly of expenditure on wages, salaries and supplements, purchase of goods and services, operations and maintenance of fixed assets, interest payments, subsidies, and transfers
<b>Revised estimates</b>	Revised budget allocation approved by the Ugandan Parliament during mid-term review
<b>Wage expenditures</b>	Recurrent expenditure on wages, salaries, and supplements

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# KEY MESSAGES

**Geographic distribution of Public Expenditure in support of Agricultural Services (PEAS) shows high inefficiency in addressing inequality.** The Northern and Eastern Regions require targeted spending to address inequality, end extreme poverty, and boost shared prosperity. The geographic disaggregation of PEAS shows that spending favors the Northern Region. This region is emerging from conflict, has much lower levels of human capital, is the least populous, and has poor infrastructure. Per capita PEAS is also persistently higher in the Northern Region but is relatively the same in the Western, Central, and Eastern Regions. In 2016, about 47 percent of the poor lived in the Northern Region and another 37 percent in the Eastern Region.

**National decentralization objectives are not fully matched by the allocation of resources.** Local governments receive a much lower share of final PEAS than agriculture-related ministries. The allocations to local governments declined from 37 percent in 2013/14 to about 7 percent in 2017/18, falling slightly short of the Agriculture Sector Strategic Plan (ASSP) target of 10 percent. Given that local governments provide frontline agricultural services such as extension and advisory services, market information services, and rural infrastructure, their budget allocations need to be increased. Further, the balance and efficiency of central and local government spending must improve.

**Institutional setup and budget architecture constrain efficient spending in the agriculture sector.** A comprehensive functional review of MAAIF and its SAGAs as well as other agriculture-related ministries is required to clarify their mandates. Budget allocations and spending should strictly follow the assigned functional mandates and strategic objectives. The agriculture Sector Working Group (SWG) should be more proactive in providing feedback on budget planning, execution, and monitoring and evaluation of impacts. MAAIF must further improve technical efficiency by aligning donor funding with ASSP targets, so that external resources finance the national priorities necessary for achieving the ASSP objectives. "

**The government's outsized role in the agriculture sector leaves little room for private sector participation.** The government seems more enamored of transforming subsistence farming into modern, commercially oriented farming with the free distribution of inputs than with the exigencies of supporting policies that: (1) enhance the capacity of MAAIF to efficiently and effectively deliver on its mandates; (2) increase public investments in infrastructure (such as irrigation and rural roads); and (3) crowd in private sector investment in agribusiness, such as firms that market inputs and outputs and provide agricultural services (for instance, mechanization and financial services). For agriculture to act as a key economic driver of Uganda's Vision 2040 and the transition to middle-income status, private sector investment must be leveraged.

**The constraints to private investment in agriculture are well known, particularly within those value chains in which small-scale producers can participate fully.** For the private sector, the motive is obviously to facilitate business development and to earn a profit. Yet the large-scale agricultural services required for agribusiness development are costly, and the associated risks are too high to be mitigated by individual firms. To leverage private sector investment in agriculture, the government must implement policies that will help to reduce the cost of doing business, and it must also co-finance some of the services provided by agribusinesses to smallholders. To achieve this, strengthening farmer organizations to integrate smallholders into agri-food value chains is key. When producers are organized into associations or cooperative societies, they can gain access to knowledge and technologies, aggregate produce to achieve scale economies, and connect with agro-processors for value addition to further increase farm incomes and reduce poverty.

**Reforming the policy on public spending for agriculture in Uganda should be a priority.** The importance of agriculture for inclusive growth is reiterated in various national development strategies but has not translated into public expenditures for the sector. It should be a priority of the government to steer public investments in agriculture toward the provision of public goods, such as R&D, extension and advisory services, and rural infrastructure. Input and output marketing should be left in the hands of the private sector. The government should focus on creating the enabling environment for private sector participation (market and policy reforms) and on regulating input quality and standards.

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# EXECUTIVE SUMMARY

- 1 The Government of Uganda (GoU) regards agriculture as a key economic sector to support Uganda's Vision 2040 and the transition to middle-income status.** It recognizes that public spending on agriculture has a pivotal role in equipping the sector to fulfil its potential to drive economic growth, create employment for a rapidly growing and predominantly young population, and ultimately reduce poverty.
- 2 To improve the quality and effectiveness of public expenditures in agriculture, Uganda has conducted its second Agriculture Public Expenditure Review (AgPER) since 2010.** This effort—undertaken by the World Bank at the behest of the Ministry of Finance, Planning and Economic Development (MoFPED)—has entailed analyses of financial data as well as institutional relationships to understand the processes of budget formulation, execution, and management as they relate to agriculture. It has also relied on analytical work showing how domestic policies influence incentives to enhance productivity, resilience, and private sector engagement in Ugandan agriculture. The results will help the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) and MoFPED to improve the technical and allocative efficiency of agriculture-related spending in the future.
- 3 Overall, the performance in implementing policy recommendations from the 2010 AgPER has been mixed.** "Between 2013/14 and 2017/18, the development budget in the agriculture sector declined from an average of 80 percent to 67 percent". Consequently, less was invested in the capital expenditures that are necessary for spurring inclusive growth. The share of PEAS going to input subsidies increased from about 19 percent in 2013/14 to about 25 percent in 2017/18 (with a high of 33 percent in 2015/16). This increased spending on inputs largely occurred at the expense of the extension and advisory services, which saw its share of PEAS decline from about 37 percent in 2013/14 to 10 percent in 2017/18. Other important functions such as inspection and quality control, feeder roads, and storage had a combined share of only about 4 percent of total PEAS. Spending on research was starting to increase, but it was cut from 17 percent of the total budget in 2013/14 to 11 percent in 2017/18. On a positive note, the share of spending on processing and marketing continued to grow (to about 21 percent in 2017/18), and the irrigation budget more than doubled in 2017/18 to about 12 percent of the total. These public expenditures are critical for leveraging private investments in the agriculture sector, as they contribute to improving access to markets, increasing value addition, and enhancing resilience to climate change and variability.
- 4 The expenditure analysis explores four major thematic areas identified by MAAIF and MoFPED:** (1) gaps between policy formulation and implementation; (2) the political economy and institutional landscape for agriculture; (3) institutional barriers at the national and local level that impede improvements in public spending on agriculture; and (4) the role of the private sector in providing public goods and services in the agriculture sector. These themes reflect the holistic perspective adopted for this review, which extends beyond issues of budget allocation and distribution to develop policy guidance and recommendations to increase the quality and effectiveness of public spending on agriculture.

**5 The analysis focuses on public expenditure in the agriculture sector (PEAS) of Uganda over 2013/14–2017/18.** Spending on agriculture occurs under the purview of many central and local government agencies. At the national level, MAAIF is the lead ministry responsible for the agricultural expenditures, along with six semi-autonomous government agencies (SAGAs): (1) the National Agricultural Research Organization (NARO), (2) the National Agricultural Advisory Services (NAADS) Secretariat, (3) the Uganda Cotton Development Organization (UCDO), (4) the Uganda Coffee Development Agency (UCDA), (5) the Dairy Development Authority (DDA), and (6) the National Animal Genetic Resource Centre and Data Bank (NAGRC&DB). But agriculture-related expenditures also occur under the Office of the Prime Minister (OPM); the Ministry of Local Government (MoLG); the Ministry of Water and Environment (MWE); the Ministry of Lands, Housing and Urban Development; the Ministry of Trade, Industry and Cooperatives; the National Forestry Authority (NFA); and the Uganda Exports Promotion Board (UEPB). At the local level, the District Production Offices also spend on agricultural activities.

**6 This summary presents the key messages emerging from the review and recommends policy and strategic actions for improving the efficiency and effectiveness of spending on agriculture in Uganda.** To provide some context for the results, a brief overview of the global experience with public spending on agriculture initiates the discussion. The main part of the analysis looks at *administrative* efficiency by examining the distribution of sector spending across administrative units (central and local governments) and different geographic (regional) levels; it looks at *technical* efficiency by considering the institutional capacity to plan, manage and execute the budget; it explores *economic* efficiency by analyzing trends in recurrent (wage bill and non-wage bill) and development spending (current and capital outlays); and it examines *functional* efficiency by looking at the composition of spending across various functions (infrastructure, research and development, extension and regulatory services).

## Global Experience With Public Expenditure On Agriculture As A Benchmark For Uganda

**7 Global experience reveals important lessons on how public spending on agriculture can enhance productivity growth and sector transformation.** "Worldwide it is evident that public expenditures matter a lot for agricultural growth", as they are needed to address inefficiencies caused by market failures and inequalities in the distribution of public goods and services. An increase in public spending on agriculture needs to be undertaken in a fiscally responsible manner, however, to avoid macroeconomic distortions that could undermine growth. Analysis of 12 East and South Asian countries during their periods of high agricultural growth—the Green Revolution—shows that, on average, these countries devoted around 10 percent of total public spending to agriculture.

**8 An important lesson from global experience is that the level of public spending matters less for growth than whether that spending is efficient and effective.** For example, in a number of settings an increase in capital expenditures on irrigation, drainage, and rural/feeder roads (under the development budget) has achieved higher impacts than focusing spending on wages and other operational expenses (under the recurrent budget). Similarly, spending more on public goods is more productive than spending on subsidies. In the recurrent budget, a good balance between wage and non-wage expenditures is essential. Allocating adequate recurrent budget to non-wage spending can enhance the sustainability of assets created through capital expenditures by providing operational and maintenance budget.

- 9** **Public spending in agricultural research and complementary services (irrigation, extension and advisory services) has generated the highest rates of return around the world.** Most high-income countries spend around 1 percent of their agricultural gross domestic product (GDP) on research, as does Brazil, a country widely regarded to have an effective research agency, Embrapa. Over the last decade, spending on agricultural research constituted about 0.4 percent of agricultural GDP in sub-Saharan Africa (SSA), compared with 1.3 percent in Latin America and the Caribbean, 0.6 percent in East Asia and the Pacific, and 0.9 percent in South Asia. Large countries in Africa have earned higher returns to research and development (R&D) (43 percent) than small countries (17 percent), but even in small countries, returns were still high enough (higher than the discount rate of 10 percent) to justify the investments.
- 10** **There is considerable scope for financing investments that have higher impact on reducing poverty.** Rural roads and irrigation infrastructure can be geographically targeted at areas where poverty is concentrated. Research can be aimed at crops, livestock, and technologies that are likely to be most useful to the poor rather than plantation export crops. Efforts to connect farmers to markets can focus on smallholders. Analysis shows that such investments have a large payoff in both economic growth and poverty reduction.
- 11** **Globally, public spending must remain flexible to cope with future challenges, and for agriculture, probably no challenge is more urgent than climate change.** Climate change threatens agriculture worldwide, but the lack of resilience of poor farmers makes it particularly serious in SSA. Projections show yields falling by 5 percent in the near term and perhaps by 15–20 percent across all crops and regions of SSA by the end of the century. Agriculture is also an important contributor to greenhouse gas emissions, particularly from deforestation, and Africa is the only region where the majority of production increases have come from expanding cultivated area, rather than increasing productivity, at the expense of forests.
- 12** **Evidence from the periods of high agricultural growth in South Asia shows that fertilizer subsidies played little or no role in that growth.** Studies in four Asian countries—Bangladesh, India, Indonesia, and Pakistan—conclude that fertilizer subsidies were not significant in farmers' adoption of technology. They instead identify R&D of new technologies, irrigation expansion, and other investments, such as roads, as the main drivers. At the height of the Green Revolution, farmers in three of the four countries (although not Bangladesh) were net-taxed for fertilizer (that is, domestic prices for fertilizers were higher than the world market price), indicating that it was profitability and not subsidies that drove technology adoption during this era. In India, the relative performance of subsidies evolved over time, with higher returns occurring in the early years of the Green Revolution and declining rapidly thereafter. Fertilizer, power, and irrigation subsidies were among the least significant contributors to productivity growth over the four decades.
- 13** **A key strategy to maximize impacts of public spending in agriculture is to ensure that the budgetary process supports efficient implementation.** Efficient allocation of resources for greater impact begins with improvements in budget management. Reviews of public expenditure in 20 African countries highlight the importance of aligning agriculture sector policies and strategies with the investment plans, Medium-Term Expenditure Frameworks (MTEFs), and annual budgets as the first step to technical efficiency in spending. Budgeting needs to start from a stronger foundation of sector strategies and national agricultural investment plans. The investment plans need to be accompanied by a monitorable results framework. In many SSA countries, the rate of budget

execution is dismal. Improving budget execution rates is essential for demonstrating that the sector can make good use of additional public resources, and for persuading ministries of finance that their budgets must be increased.

- 14 Finally, public spending brings better results when combined with better policies and institutions.** Many parts of Asia have achieved impressive gains in agricultural productivity and poverty reduction over the past half-century due to policy reforms. Recent research has quantified the potential improvement in productivity from policy reforms and several kinds of spending on agriculture. While comprehensive development of Africa's agriculture sector requires investments across multiple areas, a total factor productivity (TFP) decomposition shows that productivity improvements in Africa have been led by investments in development of new technologies (contributing 51 percent of TFP), policy reforms that improve terms of trade and provide economic incentives to farmers (20 percent of TFP), and wider adoption of new technologies (proxied by farmer education) (8 percent of TFP).

## Allocative Efficiency Of Public Expenditure In The Agriculture Sector In Uganda

- 15 Analysis of the allocative efficiency of public expenditure provides an understanding of spending priorities and the balance of spending.** Although the final share of public spending on agriculture (PEAS) more than doubled in real terms between 2013/14 and 2016/17, the share of PEAS in total public expenditure (PE) remained low throughout the period, averaging 3.6 percent. Uganda's share is also low compared to that of its East African neighbors (Kenya, Tanzania, and Rwanda) and the Maputo/Malabo Declaration target of 10 percent. "To justify an increase in budget allocation to move toward the 10 percent target" (which is aspirational, as only a few African countries have achieved or are close to achieving it), MAAIF first needs to improve the quality and effectiveness of spending in the sector.

- 16 Allocative efficiency, which consists of the economic and functional decomposition of public spending, needs to improve.** An economic decomposition of public spending on agriculture in Uganda depicts that development expenditures dominate both budgeted and final PEAS. Development and recurrent expenditures represented about 66 and 34 percent of budgeted PEAS, respectively. There were no significant differences between budgeted and final PEAS in terms of the relative sizes of development (50 percent) and recurrent (25 percent) spending. Given that budget execution rates are high (around 90 percent), this means that about 15 percent of the budgeted PEAS was not disbursed by MoFPED to the agriculture-related ministries and SAGAs.

- 17 The economic efficiency is mixes because although development expenditures averaged 66 percent, they were heavily oriented to non-wage recurrent expenditure rather than to capital expenditures.** As a result, too little was invested in irrigation, rural access roads, wholesale and livestock markets, and veterinary, sanitary, and phytosanitary laboratories and equipment, which are critical for increasing agricultural productivity and building resilience to climate change risks. The low level of capital expenditure is reflected in the poor condition of rural infrastructure and has adversely affected farmers' productivity and access to input and output markets. Similarly, the underfunded regulatory functions (sanitary and phytosanitary services) has impacted regional and international agricultural trade, and ultimately poverty reduction efforts. MAAIF therefore needs to increase the share of capital expenditure in its development budget, which is essential for productive investments.

- 18 The high share of development expenditures in PEAS could to some extent be due to misclassification.** Many items reported as development expenditures serve to fund recurrent activities or are used to purchase goods and services that are redistributed to farmers. For example, 96 percent of the NAADS budget was classified as development spending, even though much of this budget serves to buy inputs for free distribution to farmers. Making inputs accessible was integral to raising agricultural productivity, but the approach used for distributing inputs is unlikely to achieve this objective, since it is not fiscally sustainable. Where input subsidies continue to be used, they should at least be reduced to a modest share of PEAS. Input procurement and distribution should not distort the market for inputs and crowd out the private sector. Finally, subsidies for inputs should be coupled with other services (irrigation, mechanization, and extension services), targeted to farmers who can increase productivity and generate a marketable surplus, and have a clear exit strategy.
- 19 National decentralization objectives are not fully matched by the allocation of resources.** Local governments receive a much lower share of final PEAS than agriculture-related ministries. Collectively, MAAIF, NAADS, NARO, and other SAGAs capture the bulk of the allocations in the sector (approximately 92 percent). The allocations to local governments declined from 37 percent in 2013/14 to about 7 percent in 2017/18, falling slightly short of the Agriculture Sector Strategic Plan (ASSP) target of 10 percent. Given that local governments provide frontline agricultural services such as extension and advisory services, market information services, and rural infrastructure, their budget allocations need to be increased. MAAIF should find ways of reducing its headquarters operating costs and retain a modest budget for its policy, strategy, and regulatory functions.
- 20 Geographic distribution of PEAS shows high efficiency in addressing inequality.** Although the ASSP does not provide precise spatial targets, the geographic disaggregation of PEAS shows that spending favors the Northern Region. This region is emerging from conflict, has much lower levels of human capital, is the least populous, and has poor infrastructure. Per capita PEAS is also persistently higher in the Northern Region but is relatively the same in the Western, Central, and Eastern Regions. In 2006, approximately 68 percent of the poor lived in the Northern and Eastern Regions. By 2013, this proportion increased to 84 percent. In 2016, about 47 percent of the poor lived in the Northern Region and another 37 percent in the Eastern Region. In the northeast, almost three in four residents (74 percent) live below the national poverty line. The Northern and Eastern Regions require targeted spending to address inequality, end extreme poverty, and boost shared prosperity.
- 21 The functional efficiency of public expenditure on agriculture in Uganda has improved.** An increasing share of PEAS was allocated to areas that can generate the highest returns on investment: R&D, extension and advisory services, and irrigation. But other critical public goods remained underfunded, undermining the potential impact of research, extension and advisory services, and irrigation on productivity growth and resilience. The underfunded public goods included inspection and quality control services and feeder roads and other infrastructure. Although the private sector cannot invest in these core public goods, they are critical for crowding in private investment in agricultural production and agribusiness.
- 22 Reforming the policy on public spending for agriculture in Uganda should be a priority.** The importance of agriculture for inclusive growth is reiterated in various national development strategies but has not translated into public expenditures for the sector. It should be a priority of the government to steer public investments in agriculture toward the provision of public goods, such as

R&D, extension and advisory services, and rural infrastructure. Input and output marketing should be left in the hands of the private sector. The government should focus on creating the enabling environment for private sector participation (market and policy reforms) and on regulating input quality and standards. In addition, it should fully implement extension reforms by allowing public goods and services for agriculture to be delivered by both public and non-state actors (including agribusinesses), and it should crowd in the private sector by directly offsetting or defraying the costs to agribusiness of delivering those services, through public-private partnership (PPP) arrangements.

## **Technical Efficiency Of Public Expenditure In The Agriculture Sector In Uganda**

**23** **Technical efficiency (doing things well) in public spending involves making the best use of inputs to provide outputs in the form of public services.** Most donor funded projects in Uganda are implemented inefficiently, for various reasons. But not all of the blame for technical inefficiency rests with MAAIF. Delayed budget ratification by Parliament, untimely and insufficient release of counterpart funds by MoFPED are beyond the purview of MAAIF, yet these constraints cause several years to pass before a donor-funded project can be launched in Uganda. Other constraints, including weak procurement and financial management capacity, improper appraisal and feasibility work, poor coordination of project preparation and implementation between MAAIF and local governments, and inadequate operating budgets for technical staff are within the mandates of the ministry itself. These result in high cost overruns, low-quality work, and other kinds of wastage.

**24** **The institutional setup and budget architecture constrain efficient spending in the agriculture sector.** A comprehensive functional review of MAAIF and its SAGAs as well as other agriculture-related ministries is required to clarify their mandates. Budget allocations and spending should strictly follow the assigned functional mandates and strategic objectives. The respective roles of the MAAIF and NAADS (along with Operation Wealth Creation—OWC) regarding the provision of public good and services must be clarified. The agriculture Sector Working Group (SWG) should be more proactive in providing feedback on budget planning, execution, and monitoring and evaluation of impacts. MAAIF must further improve technical efficiency by aligning donor funding with ASSP targets, so that external resources finance the national priorities necessary for achieving the ASSP objectives. "Better coordination of the central and local governments in budget processes and management is essential". MAAIF should also develop an effective framework for capturing off-budget spending by donors, because the ministry needs to be able to track off-budget spending in the sector and assess its impacts.

**25** **Technical inefficiencies pervade the delivery of subsidized inputs to farmers.** Considerable volumes of inputs have been procured by the NAADS and distributed by the OWC, ranging from seed (maize, beans, soybeans, rice, sorghum, groundnuts, and Irish potatoes) to banana plantlets, heifers, layers and broilers, and tilapia and catfish fingerlings. These inputs are not costed in the National Budget Framework Paper, but they have averaged US\$100 million equivalent per year. The unit costs of some inputs procured were 20–50 percent higher than comparable market prices. The inputs often were of poor quality, distributed late without communication or consultation with districts, without extension services, and rarely with complementary inputs such as fertilizers and pesticides. Results were not monitored. Wastage was unavoidable. Giving free inputs to farmers is not sustainable and in the long run breeds dependency or entitlement. The government should address these inherent technical inefficiencies.

## The Policy And Institutional Landscape For Agricultural Expenditures In Uganda

**26** **The government's outsized role in the agriculture sector leaves little room for private sector participation.** The government seems more enamored of transforming subsistence farming into modern, commercially oriented farming with the free distribution of inputs than with the exigencies of supporting policies that: (1) enhance the capacity of MAAIF to efficiently and effectively deliver on its mandates; (2) increase public investments in infrastructure (such as irrigation and rural roads); and (3) crowd in private sector investment in agribusiness, such as firms that market inputs and outputs and provide agricultural services (for instance, mechanization and financial services).

**27** **A review of the agricultural policy and institutional environment clearly shows that MAAIF's role in developing policy for the agriculture sector has diminished over time.** Some sector policies have emanated from the National Planning Authority (an agency of MoFPED). The ASSP, which currently provides strategic direction to sector development, is not adhered to strictly. The links between the ASSP, the MTEF for agriculture, and the budget are not obvious. Although the SWG provides a platform for stakeholders to participate in the budget process and for monitoring budget execution, its effectiveness has been less than required. Finally, the roles and responsibilities of various MAAIF agencies in budget planning and execution are unclear, let alone the interface between MAAIF and local governments in the budget process.

**28** **Public expenditures on agriculture underperform because of structural deficiencies and capacity constraints—but even so, MAAIF has ample scope to improve the technical and economic allocation of public resources to spur growth in the sector.** To achieve this improvement, MAAIF must continue with radical institutional reforms to reflect its new roles, including its role in delivering extension services (transferred from NAADS), and reinforce its role in policy and planning. Champions are needed from within MAAIF, at the senior leadership level, to articulate the rationale, significance, and outcomes of the reforms.

**29** **More specifically, to improve PEAS from an institutional point of view:**

- MAAIF should identify, agree, and target the highest priorities to ensure that limited resources are used as efficiently and effectively as possible.
- In line with the widely accepted principles of good governance, MAAIF should ensure transparency, accountability, and participation in its service delivery to maximize the efficiency and effectiveness of its expenditures.
- Public expenditures should address the roots, not the results, of market failures. Rather than spending the bulk of PEAS on free distribution of inputs, develop incentives (an enabling environment) for private sector participation in input markets, and strengthen the regulatory functions of MAAIF to ensure the quality of inputs.
- The provision of free inputs is fiscally unsustainable, creates dependency, and constrains private investment in input distribution. Targeted input subsidies should be directed to producers who have the potential to transition from subsistence (producing for domestic consumption) to commercial farming (producing surplus for the market).
- Integrate projects into the strategy for agricultural growth and development (ASSP and the

National Development Plan). A programmatic approach to sector development could reduce the number of projects, and the establishment of a Single Project Implementing Unit should reduce transaction costs and help MAAIF and local governments to deliver on their mandates.

- Strategic improvements in public spending on agriculture must begin by making much greater use of the Budget Framework Paper (BFP) to provide feedback to MoFPED, and by enforcing the technical assistance, oversight, and monitoring roles of the SWG.
- To develop a much more credible, robust planning process, MAAIF requires a Directorate of Planning with capacity, authority, and influence. Planning should devote greater attention to the criteria used for prioritization, expected outcomes, detailed expenditure estimates, and linking investment plans closely to anticipated MTEF ceilings (and indicating how plans will change if ceilings increase or decrease).
- Much better impact evaluation and expenditure tracking systems are required to place policy makers and planners in a better position to guide budget allocations across subsectors and address operational constraints in the portfolio.

**30** **The balance and efficiency of central and local government spending must improve.** Local governments should get a bigger share of PEAS than the current average of less than 10 percent. District fragmentation, underfunding, and low capacity at the local government level have caused the quality of services to fall across the board, even though the total number of people with ostensible access to some services may have grown. Measures to reverse the negative trend in service delivery under local governments include:

- Strengthen local government capacity for planning and budgeting, financial management, and procurement to improve the efficiency and effectiveness of spending, and most important, to increase the quality and impact of agricultural services.
- Develop a framework to engage citizens in planning, budgeting, and performance evaluation to ensure transparency and accountability. Sustained improvements in service delivery depend, at least to some degree, on the ability to hold local governments accountable.
- Where possible, shift procurement from the central to the district level to reduce transaction costs, minimize wastage and leakage, improve the quality of supervision, and empower the people of the district.
- Discontinue the fragmentation of districts (if possible, consolidate to reduce administrative costs), and strengthen governance and service delivery capacity in existing districts.
- Explore other sources of local revenue for local governments to fill the gap left behind by the abolished graduated tax.
- Address the vacuum in human resource capacity at the local government level to ensure adequate staff numbers and skill sets for planning production interventions, implementing them, and monitoring and evaluating their performance.

## The Role Of The Private Sector In The Provision Of Public Goods And Services

**31** For agriculture to act as a key economic driver of Uganda's Vision 2040 and the transition to middle-income status, private sector investment must be leveraged. Agriculture by nature is a private sector activity, in which commercial firms are in the best position to understand market potential and to engage within their specific value chains. "Moreover, the scarce public resources should be focused on those core public goods and services for which private financing is unlikely". A rigorous analysis will help to identify investments that generate largely public goods in which the private sector cannot invest, and investments that yield private goods that will attract private sector financing. Public-private partnerships could be promoted in the case of relatively large investments.

**32** At the same time, the constraints to private investment in agriculture are well known, particularly within those value chains in which small-scale producers can participate fully. For the private sector, the motive is obviously to facilitate business development and to earn a profit. Yet the large-scale agricultural services required for agribusiness development are costly, and the associated risks are too high to be mitigated by individual firms. The financial markets are equally hesitant to develop products for financing agriculture, which to a large extent has limited the operations of even relatively larger agribusinesses. Consequently, they have restricted their businesses to certain geographical areas and specific value chains. To further leverage private sector investment in agriculture, the government must implement policies that will help to reduce the cost of doing business, and it must also co-finance some of the services provided by agribusinesses to smallholders. Specific steps include:

- **Strengthening farmer organizations to integrate smallholders into agri-food value chains.** When producers are organized into associations or cooperative societies, they can gain access to knowledge and technologies, aggregate produce to achieve scale economies, and connect with agroprocessors for value addition to further increase farm incomes and reduce poverty. Federated producer organizations (such as cooperative unions) can form productive alliances to commercially produce and supply agreed quantities and quality of a specific commodity to a specific market – taking advantage of growing population and urbanization in Uganda.
- **Supporting vertical integration of farmer organizations with larger producers and processors.** It is necessary to foster the competitiveness of Uganda's agri-food system and the economic inclusion and market power of smallholders. Vertical integration is important for smallholders to commercialize their production and access credit and markets. For larger producers (nucleus estates and agroprocessors), vertical integration enables quantity and quality assurance, and value addition.
- **Increasing access to agricultural finance for all parts of agri-food systems.** Savings and credit cooperatives and warehouse receipt systems are promising vehicles for fostering financial inclusion of smallholders and addressing the lack of collateralizable land titles for loans. Other options for smallholder financial inclusion are value-chain financing and smartphone-based financial technologies (FinTech).
- **Strengthening the policy and regulatory framework.** To foster private sector participation in Uganda's agri-food systems, a range of policy and institutional challenges must be addressed, particularly in regard to input regulations and quality controls. The prevalence of low-quality inputs in the market significantly reduces returns and adoption rates. MAAIF needs to beef up

its capacity to regulate the input market. A strong plant protection framework is also needed to protect crops from pests and diseases and allow the government to regulate cross-border agricultural trade more effectively. There is an urgent need for the government to clarify the role of the private sector (agribusinesses) in providing agricultural services under public-private partnership arrangements as well as contract farming.

- **Addressing land tenure issues.** Rising pressure on land reduces the productivity of smallholder farming systems, dimming prospects for future generations to expand cultivated area, and increasing the number of landless young people in rural areas. Secure property rights over land are central for attracting private investment—by smallholders and large commercial operations alike—in agricultural development and commercialization.

## Conclusions

**33** This review has identified the critical policy and institutional opportunities for Uganda to transform its agriculture sector as envisioned. Reaping the full benefit of the opportunities indicated by sectoral trends will require an enabling policy environment, efficient institutional processes, and sector stakeholder coordination. In addition, public spending on agriculture must be directed to the provision of “public goods” such as research, extension, and infrastructure rather than to “private goods” like subsidized or free inputs. Growth in agricultural productivity cannot be achieved without better access to and adoption of high-quality agricultural inputs by smallholder farmers. Better access to technologies and more widespread technology adoption will require stronger regulatory measures, more secure land tenure, enhanced input quality controls, and full implementation of the ongoing extension reforms to sharpen the focus on knowledge transfer.

**34** Given that climate variability and pest outbreaks are on the rise, Uganda’s agricultural systems and rural livelihoods must become more resilient. Farmers should be equipped with climate-smart land, water, and livestock management practices, irrigation infrastructure, and access to information about climate and disaster risks. Producer arrangements and integration into agri-food value chains should be supported to increase farmers’ access to finance and markets, and the competitiveness of the sector more broadly. As diverse agribusinesses develop in a range of value chains, they will link greater numbers of farmers to sources of inputs, markets, and finance and improve rural livelihoods.

**35** The growing budget deficit means it is unlikely that GoU will increase spending on agriculture to reach the Malabo–CAADP target of 10 percent in the near future. It is, therefore, prudent that MAAIF and other agriculture-related ministries and SAGAs as well as local governments improve the allocative and technical efficiency to increase the effectiveness (results or impacts) of their current budget allocations. At 3.6 percent of the public expenditure (PE), Uganda’s PEAS is still above the SSA average of 2.0 percent. And although a real GDP growth rate of 6.0 percent or more is projected over the next few years, the competition for scarce resources from other key sectors such as human development (health and education) and infrastructure (energy, roads and water) is also growing.

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**UGANDAN AGRICULTURE AND THE OBJECTIVES OF  
THE PUBLIC EXPENDITURE REVIEW**

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## 1.1 Objectives of the Agriculture Public Expenditure Review

**1 This Agriculture Public Expenditure Review (AgPER) analyzes the efficiency and effectiveness of public expenditures on the agriculture sector in Uganda.** The main objective was to identify practical measures for improving the quality of public expenditures on agriculture. This effort entailed analyses of financial data as well as institutional relationships to understand the processes of budget formulation and execution as they relate to agriculture. The results will help the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) and the Ministry of Finance, Planning and Economic Development (MoFPED) to improve the technical and allocative efficiency of agriculture-related spending.

**2 The AgPER was undertaken in response to the MoFPED's request to the World Bank to analyze the level and composition of expenditures in the agriculture sector; a further objective was to assess the impact of that expenditure on overall sector growth and transformation.** The review emanated as well from discussions by the agriculture Sector Working Group (SWG), especially during the budget process, which consistently raised concerns about seemingly low budget allocations to the sector, as well as the failure to align limited resources with sector policy and strategies. In addition to providing a better understanding of the level and composition of expenditure, the AgPER aimed to identify the types of expenditures that would promote agricultural transformation in Uganda. Such expenditures include those that can (1) help smallholder farmers produce for the market and add value, so that they can transition from subsistence to commercially oriented production, and (2) leverage private investments in the sector to

spur inclusive growth, increase food security, and reduce poverty.

**3 Additional justification for the AgPER comes from the New Partnership for Africa's Development (NEPAD).** Under NEPAD, Africa's Heads of State committed to allocate 10 percent of their national budgets to the agriculture sector each year. Ever since, assisting countries to increase the quantity and quality of public agricultural spending has been a major objective of the NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP). Under CAADP, each country is to undertake a public expenditure review that documents the level, composition, and quality of expenditures in the agriculture sector. This information is also useful to development partners supporting the sector in Uganda, the private sector (agribusinesses), and the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) for Eastern and Central Africa, which is mandated by the Common Market for Eastern and Southern Africa (COMESA) to monitor government spending on agriculture in the region.

**4 The last AgPER in Uganda was undertaken in 2010.** Since then very little analytical information has been available to ensure that public expenditures are prioritized to support the objectives of transforming Ugandan agriculture. Such information is critical in an environment where the national budget is increasingly stressed by limited domestic revenue generation, declining aid inflows, and competing demands of priority sectors.

### **1.1.1 Findings of the Agriculture Public Expenditure Review 2010**

**5** The Uganda AgPER (2010) concluded that between 2001/02 and 2008/09, agriculture sector expenditures could be divided into two distinct phases. During the first phase, from 2001/02 to 2003/04, the budget for agriculture fell sharply in both nominal and real terms. It began to recover after 2004/05. In nominal terms, cumulative growth in the sector budget was 46 percent higher in 2008/09 than in 2001/02. Despite this seemingly spectacular increase, in real terms the 2008/09 sector budget was about the same as it was in 2001/02. Real expenditures were 38 percent higher in 2008/09 than at their low point in 2004/05. As a share of the national budget, the agriculture sector budget had fallen to 3.8 percent in 2008/09 from 5.7 percent in 2001/02. In terms of share of gross domestic product (GDP), the sector budget remained stable, albeit low, at 1.6 percent. These were data for the approved budget, but the released budget was on average 10 percent lower, reducing the share of sector expenditure in GDP to 1.2 percent.

**6** The agriculture sector budget was not much larger when defined according to the United Nations Classification of Functions of Government (COFOG). Under the COFOG classification, which is recommended by NEPAD/CAADP for comparing agricultural expenditures across African countries, the sector budget as a percentage of the national budget was about 1 percent higher (for example, increasing to 5.4 percent for the released budget in 2005/06). Donors accounted for substantial off-budget spending; although information on these expenditures was difficult to obtain, it was estimated to account for 10–20 percent of the total sector budget. Overall, even with off-budget funds, the agriculture

sector budget in Uganda was still about twice as low as necessary to meet the Maputo and Malabo pledge to allocate 10 percent of the national budget to agriculture.

**7** According to the Medium-Term Expenditure Framework (MTEF), agriculture sector expenditures were not projected to grow but to keep declining. In 2012/13, the agriculture sector expenditures were expected to be 3.2 percent of national expenditures, compared to 3.8 percent in 2008/09 and 4.6 percent in 2001/02. Given this outlook, it was more critical than ever to ensure that scarce budgetary resources were used in a highly efficient and effective way at the central level (MAAIF and its SAGAs, and agriculture-related ministries) and at the local government level.

**8** Compared to spending on agriculture in high- and middle-income countries, spending on agriculture in Uganda (adjusted by the size of the sector) was low, but comparable to spending in selected countries of sub-Saharan African (SSA). The AgPER 2010 also concluded that three conditions needed to be met to maximize the impact of public spending on agriculture in Uganda. First, public expenditures on agriculture would need to be supported through an enabling environment in which agricultural prices were subject to few distortions. It would be counterproductive to raise the public expenditure on agriculture when farm-gate prices were depressed. Second, the mix of spending needed to be efficient (allocative efficiency). Spending that does not contribute (or does not contribute as much) to growth and poverty reduction, relative to alternative goals, is allocatively inefficient or unproductive. Third, technical efficiency needed to be high. Technical efficiency in the public sector involves making the best use of inputs to provide outputs in the form of public services. Put simply, technical efficiency is doing things well,

while allocative efficiency is doing the right things. According to the AgPER 2010, when those three conditions are met, even small budgets are well positioned to generate growth and encourage more private investment in the sector, and the scaling up of agriculture sector expenditure in Uganda will bring the highest rates of return. In light of these findings, the AgPER 2010 made some key policy recommendations on the allocative and technical efficiency of public expenditure, as well as budget processes, which are summarized below.

### **1.1.2 Policy recommendations from the Agriculture Public Expenditure Review 2010**

**9 Allocative efficiency.** Allocative efficiency (economic and functional decomposition) was found to be low, and the report called for its improvement.

**10** The first drawback identified through the economic decomposition was the small share of capital expenditure in the agriculture sector budget. Development expenditure was not synonymous with capital expenditure, as usually assumed. Although the development expenditure made up about 80 percent of the agriculture budget, it was heavily oriented to non-wage recurrent expenditures, at the expense of capital expenditures. The share of capital outlays in the 2008/09 approved budget was 6 percent, down from an already low level of 11 percent in 2005/06. The report recommended that development budget should be directed to capital expenditures (for example, to research and development, and to rural infrastructure such as irrigation and feeder roads), which generate higher returns to investment, rather than current expenditures.

**11** The second drawback identified through the economic decomposition was that agriculture sector expenditures were increasingly dominated by non-wage recurrent expenditures, mainly subsidized farm inputs and other goods. Between 2005/06 and 2008/09, non-wage recurrent spending, mainly for farm inputs, comprised 65 percent of MAAIF's development budget on average. The share of non-wage recurrent spending in MAAIF's total budget grew from 49 percent in 2005/06 to 80 percent in 2008/09. Making inputs accessible is integral to raising agricultural productivity, but the approach taken—distributing inputs—was unlikely to achieve this objective, because it favored the wealthiest farmers, who could already afford the inputs. This approach did not strengthen private input suppliers, improve the targeting of subsidies (through the use of e-vouchers, for example), or invest in rural infrastructure to ensure that farmers could obtain inputs easily. The report recommended that resources should be shifted from spending on private goods (subsidized inputs) to public goods (extension services, regulatory functions, and rural infrastructure), which also have potential for increasing productivity and reducing poverty.

**12** The third problem identified through the economic decomposition was the larger share of wage and operational expenditures going to MAAIF Headquarters relative to other MAAIF departments. MAAIF Headquarters absorbed 35 percent of the recurrent budget. The report recommended that the headquarters operating costs should be reduced, and more operating funds shifted to other departments of MAAIF and local governments (districts and sub-counties), where recurrent expenditures are dominated by wages, leaving little operational funding for the technical staff to deliver on their mandates—public agricultural services.

**13** At first glance, the functional composition looked quite efficient, given that the largest share of the budget was allocated to **advisory services and agricultural research**. Between 2005/06 and 2007/08, these categories with the highest potential for enhancing pro-poor growth absorbed 57 percent of the sector budget. Even so, many other core public goods remained underfinanced, undermining the potential impact of research and advisory services. The critically underinvested areas were irrigation, rural or feeder roads, livestock and plant pest and disease control, regulatory services, and institutional development. These are the core public goods that the private sector will not invest in providing, but they are essential for catalyzing private investment in agricultural production and agribusiness.

**14** **Technical efficiency.** Most of MAAIF's development projects had low technical efficiency for various reasons, some of which were within the purview of the ministry itself. The report recommended that technical efficiency should be improved for MAAIF to make a convincing case for substantially scaling up funding for agriculture. Many institutional factors prevented projects from being implemented efficiently and generating the intended results, including delayed budget ratification by Parliament, untimely and insufficient release of government counterpart funds, weak procurement and fiduciary capacity (at MAAIF and the local government level), and insecurity in northern Uganda. These constraints increased transaction costs and adversely affected the viability of projects. MAAIF was advised to keep raising these important issues with MoFPED and to actively seek concerted remedies at the national and local government levels.

**15** **Price distortions.** Uganda had successfully addressed one important component of the efficiency of public expenditure, which is agricultural price distortions. Most farm-gate prices were at the level of reference border prices adjusted for marketing costs. In 2001–04, the rate of assistance to agriculture was estimated at 1 percent, with no taxation to export commodities and about 13 percent support to imports, such as rice. The non-agricultural rate of assistance had also notably decreased, reducing the prices of farm inputs and stimulating resource flows to agriculture. The policy environment in Uganda was described as quite conducive for public expenditure to have a lasting impact.

### 1.1.3 Agriculture Public Expenditure Review 2019

**16** The intervening years since the AgPER 2010 have reinforced the view that **public spending on agriculture has a pivotal role to play in Uganda**. Efficient and effective spending on agriculture would help the sector to achieve its potential to contribute to inclusive growth, create employment for the country's rapidly growing and predominantly young population, and ultimately to reduce poverty. Accordingly, this new AgPER aims to identify how public spending can best support agriculture to deliver growth through increased productivity, stronger resilience to climate change and other production risks, and more effective private sector engagement in the provision of public goods in the sector.

**17** **MoFPED has challenged line ministries to produce value-for-money analyses of their expenditures to provide a basis for considering increased budgetary allocation.** Line ministries, including MAAIF, often complain to MoFPED about insufficient budget allocations. Due to inadequate

expenditure information, the sector Budget Framework Papers (BFPs) contain insufficient information on expenditures in the previous year and on what they achieved. Without this information, it is difficult to develop and justify a more evidence-based budget allocation for the coming year. Thus, except for few cases, annual budgets and MTEF ceilings represent only incremental changes, irrespective of strategic and emerging priorities.

**18 AgPER 2019 also places a strong emphasis on the relationship between public expenditure and policy.** It builds on prior analytical work by the World Bank<sup>1</sup> that highlights the role of domestic policies in limiting the incentives for producers to enhance productivity and resilience and in curbing private sector engagement in Ugandan agriculture. That work also finds growing deficiencies in budget formulation, allocations, and execution in MAAIF and agriculture-related ministries. MAAIF is deeply concerned about inadequate resources and limited potential for realigning expenditures to high priority activities set forth in its Agriculture Sector Strategic Plan (ASSP). Currently, the bulk of MAAIF's budget is allocated to specific activities, either for the core autonomous organizations—the National Agricultural Research Organization (NARO) and the National Agricultural Advisory Services (NAADS)—or for activities to which the Government of Uganda (GoU) has committed under various projects. Therefore, MAAIF has strong interest in conducting a comprehensive AgPER to tailor its future expenditures to its priorities identified under the ASSP to improve the quality of public service delivery; and make a compelling case to appropriate levels of funding for agriculture.

## 1.2 The Macroeconomic and Fiscal Environment

**19 In Uganda, the fiscal deficit, including arrears repayments, widened to 4.8 percent of GDP in 2017/18 from 3.8 percent the previous year.<sup>2</sup>** At an estimated 15 percent of GDP in 2017/18, total revenue collections were weaker than in the previous year. Overall, collected revenues were below the level projected in the government budget, which assumed that total revenues would be around 16.6 percent of GDP. In other words, tax revenues undershot government plans by 1.6 percent of GDP, or roughly USh1.4 trillion. Due to the wider fiscal deficit, the government increased its borrowing. External project financing, rather than budget support, continued to be the primary source of foreign borrowing. This contributed to the rising external debt interest and principal payments. In the domestic market, the government borrowed to finance the emergency supplementary budget in the fourth quarter of 2017/18. Consequently, the total public debt stock accelerated and reached 41 percent of GDP at end-2017/18, of which 28 percent of GDP represented external public debt, while domestic public debt stabilized at 13 percent of GDP.

**20 The expenditure mix deteriorated further in 2017/18, with excessive current spending and sizable under-execution in capital spending.** Overall, national current spending in 2017/18 exceeded the budgeted amount by 32 percent (or by 3.6 percent of GDP). This overshooting was due to higher purchases of goods and services, transfers to government agencies, and employee costs. Excess current spending was offset by a fall in

<sup>1</sup> "Closing the Potential-Performance Divide in Uganda Agriculture" (the AgGAP ASA) and a closely aligned study, "Uganda: Governance and Public Expenditure Aspects of Agriculture for Shared Growth."

<sup>2</sup> World Bank (2018d).

capital spending to an estimated 4.4 percent of GDP (or 0.6 percent of GDP). Compared to its peers, Uganda's capital spending is less than half the size of Rwanda's capital outlays at 10.3 percent of GDP, and only 60 percent of Kenya's at 7 percent of GDP. Reining in excessive current spending will therefore be pivotal in keeping public debt under control, while also allowing capital spending to be executed as planned (World Bank 2018d). The decline in capital spending is driven by lower externally financed capital outlays, which are associated with land acquisition issues and a lack of government co-financing.

### **1.3 The Growth Potential for the Agriculture Sector in Uganda**

**21** The agri-food system in Uganda stands to benefit from enormous opportunities created by population growth and urbanization. Domestic and regional demand for agricultural commodities is rising rapidly as increasing numbers of urban dwellers demand more processed food and protein-rich diets. By 2050 about 102 million people will live in Uganda, more than double its current population. About one-third of them will probably live in cities, compared to only about 17 percent now.

**22** Uganda already has a strong competitive position in agri-food trade. The country is a net exporter of agri-food products, and in the last decade it has maintained a positive trade balance for most agri-food products. Agri-food products account for more than half of national exports. Cash crops like coffee and tea are by far the dominant export commodities, generating around one-fifth of all export earnings. Other key products include maize, beans, bananas, and some livestock and fish.

**23** "To capture the expanding markets for its products in the future, Ugandan agriculture must start to grow more rapidly". Agriculture has traditionally been an important component in Uganda's economy and a major driver of growth. In the last couple of decades, it has provided about one-quarter of national GDP. Agriculture's share in the overall economy is slowly diminishing because the information and communication services, as well as construction, have been major sources of economic dynamism in recent years. In real terms, agriculture has been growing at 2.5 percent annually since 1995, even as GDP growth at 6.3 percent per year has made Uganda one of the fastest-growing African economies.

**24** The good news is that the agriculture sector has tremendous natural potential for additional growth. Land and water resources for agriculture in Uganda are among the best in Africa, due to the rich volcanic soils and the occurrence of two wet seasons across most of the country (CCAFS 2017). Uganda is also one of the 10 most biodiverse countries globally. It is host to 18,783 recorded species of fauna and flora, and farmers in its varied agroecologies cultivate crops as distinct in their growing profiles as mountain tea and dryland millet. There is immense potential as well for developing the livestock value chains.

**25** The agri-food system also exhibits strong prospects for value-addition. Because Uganda has two wet seasons, it can produce food at a relatively lower cost and in more stable volumes than neighboring countries. When food processing is considered alongside primary production, the Ugandan agri-food sector has higher potential to create jobs than the services or industrial sectors. The share of services in GDP increased to 57 percent in 2018, but the services sector has less of a socioeconomic (poverty reduction)

impact than agriculture, which remains largely informal, with relatively low labor productivity. As diverse agribusinesses—particularly in the dairy, maize, and coffee value chains—have developed over recent years, they have linked greater numbers of farmers to sources of inputs, markets, and finance, and have improved rural livelihoods.

**26 Continued low growth in agricultural productivity will significantly diminish these prospects.** Agricultural productivity growth is based on increased technical (or financial) efficiency of input use, combined with technological innovation (knowledge), which together allow farmers to produce more with less. Productivity enhancements are measured by total factor productivity (TFP), or the ratio of output produced to the amount of all inputs used. For Uganda, average TFP has been negative since around 2000 (World Bank 2018a), primarily because input use and technology adoption in Uganda remain among the lowest in SSA. For example, on average Ugandan farmers apply 1.2 kilograms per hectare of inorganic fertilizer each year, compared to 45 kilograms in Ethiopia and 146 kilograms in Malawi (Sheahan and Barrett 2014). Only about 4 percent of Ugandan farmers use a package of production-enhancing technologies, defined as a combination of fertilizer, improved seed, and supportive extension services (Bategeka, Kiiza, and Kasirye 2013). Consequently, yields for maize, millet, rice, and sorghum, for instance, are estimated to be only 20–33 percent of the potential yields for these crops under rainfed conditions, and even less under irrigated conditions (PARM 2015).

**27 Improvements in productivity are critical because food insecurity and malnutrition are still important threats in Uganda.** Food insecurity in Uganda is classified as “serious” by the 2018 Global Hunger Index. The northern and eastern areas are the most vulnerable to food insecurity and malnutrition, and they are also receiving large numbers of refugees from neighboring countries affected by conflict, including the Democratic Republic of Congo and South Sudan. Overall, and despite clear improvements in recent years, 13 percent of the population is stressed regarding food security (IPC Phase 2), and 1 percent of the population is experiencing a food security crisis (IPC Phase 3).<sup>3</sup>

**28 The presence of food insecurity and malnutrition reflects the high vulnerability to climate change in Ugandan agriculture and among the rural poor.** The effects of the 2016 La Niña (which resulted in severe drought) as well as outbreaks of fall armyworm have worsened poverty and food insecurity. Although the share of people living below the national poverty line more than halved between 2002 and 2013, falling from 40 percent to 19.7 percent, in 2016/17 the national poverty rate had risen to about 27 percent. At the same time, the food-secure proportion of the population (IPC Phase 1) dropped to 69 percent, while the stressed population (Phase 2) rose to 25 percent and the population in crisis (Phase 3) rose to 6 percent.

<sup>3</sup> The Integrated Phase Classification (IPC), widely accepted by the international community, describes the severity of food emergencies. Based on common standards and language, this five-phase scale helps governments and other humanitarian actors to quickly understand a crisis (or potential crisis) and act. IPC Phase 2 households have minimally adequate food consumption but cannot afford some essential non-food expenditures without engaging in stress-coping strategies. IPC Phase 3 households either have food consumption gaps that are reflected by high or above-usual acute malnutrition, or they are marginally able to meet minimum food needs, but only by depleting essential livelihood assets or through crisis-coping strategies.

**29** "Uganda is among the countries that are most vulnerable but least adapted to climate change". It scores 155 of 188 countries on the ND-GAIN index,<sup>4</sup> meaning that while its exposure to agriculture-related risks is high, the capacity of its producers and agricultural systems to mitigate risks is low. Crop and livestock pests and diseases, as well as drought spells, are among the top six agricultural risks in Uganda (PARM 2015), and their occurrence is projected to increase under climate change (CCAFS 2017). These circumstances indicate that improved inputs alone will not sustainably enhance agricultural productivity if they are not accompanied by knowledge and technology for climate-smart agriculture, as well as sustainable land and water management practices, to build resilience to climate change.

**30** Uganda's agricultural systems are also vulnerable because they depend heavily on rainfall. Less than 1 percent of smallholder producers use irrigation (Bategeka, Kiiza, and Kasirye 2013). The government is committed to increasing investments in irrigation and drainage systems to support smallholders who are making the transition from subsistence agriculture to market-oriented commercial production. Since irrigation may be unaffordable for subsistence farmers, the adoption of other measures, such as rainwater harvesting, water pans, valley tanks, and water conservation technologies, should be encouraged (World Bank 2018a).

**31** Productive and sustainable agriculture is a proven pathway out of poverty and food insecurity. Uganda is still a predominantly rural country, with over three-quarters of the population residing in rural areas. Because agriculture employs about 70 percent of

the country's labor force, it is critical for household income growth and consumption. The performance of agriculture has been closely linked to household income growth and subsequent poverty reduction (Hill and Mejia 2016). Indeed, agricultural households accounted for 79 percent of the poverty reduction that occurred between 2002 and 2013.

**32** Uganda's agri-food system can play a significant role in enhancing employment opportunities for the country's predominantly young and rural population. The agriculture sector is particularly important for young Ugandans, who are the majority of the population: 80 percent of Ugandans are below the age of 35 and, with a median age of 16 years, Uganda has the youngest population of any country in the world (Aga Khan University 2016). More than three quarters of people aged 15–24 engage in agriculture as their first job, mostly in primary production (Yeboah and Jayne 2018). An analysis of six SSA countries shows that transforming their food systems from a focus on primary production to market-oriented agri-food value chains could create more jobs between 2010 and 2025 than the rest of the economy (Townsend et al. 2017). By 2010, the number of jobs in agribusiness amounted to 10 percent of all jobs in agriculture in Eastern and Southern Africa (Tschorley et al. 2015).

**33** The Government of Uganda's Vision 2040 and Second National Development Plan (NDP II) give priority to agriculture because of its capacity to spur Uganda's socioeconomic transformation into a middle-income country by 2040. In response, the ASSP (2015/16–2019/20) prioritizes investments that: (1) increase on-farm productivity to at least 50 percent

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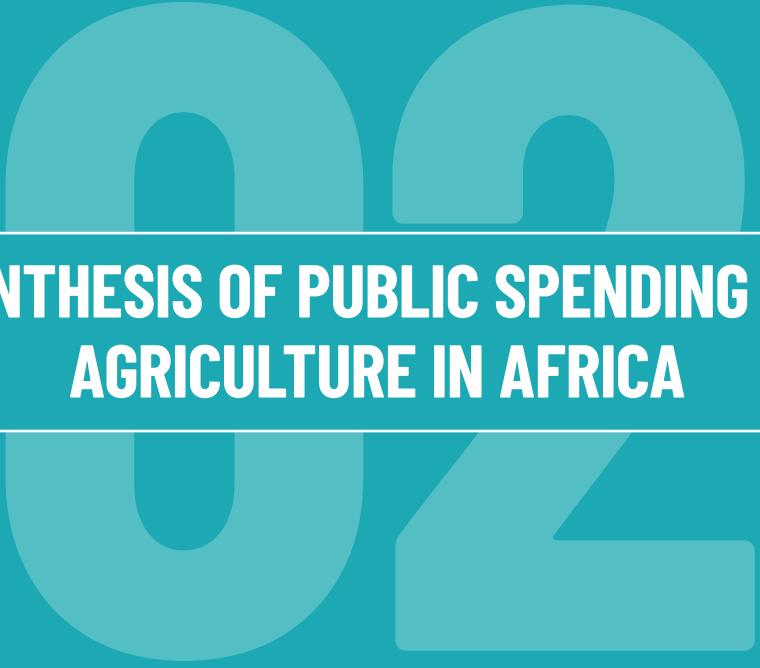
4 The ND-GAIN Country Index "summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience." See <https://gain.nd.edu/our-work/country-index/>.

of the yields obtained on research stations; (2) transform subsistence farmers into enterprise farmers, and smallholder farmers into commercial farmers; (3) increase food security and food availability in all parts of the country; (4) increase agricultural exports; (5) increase the efficiency and effectiveness of agricultural services; and (6) increase the sector's resilience to the impacts of climate change. To achieve the envisaged agricultural transformation, the sector must address the underlying constraints, which will lead to: (1) enhancing agricultural productivity and building resilience to sector-related risks; (2) increasing competitiveness of key agricultural value chains and access to markets by smallholder producers; and (3) strengthening institutional capacity and improving the regulatory environment.

**34 To speed the transformation of Uganda's agri-food sector, critical policy weaknesses must be addressed.** Primary production cannot become more productive without better access to and adoption of high-quality agricultural inputs. Better access and adoption will require stronger regulatory measures, more secure land tenure, enhanced input quality controls, and full implementation of the ongoing extension reforms to sharpen the focus on knowledge transfer. Given increasing climate variability and pest outbreaks in Uganda, it is vital to increase the resilience of agricultural systems and rural livelihoods. To this end, farmers should be equipped with climate-smart land, water and livestock management practices, irrigation infrastructure, and access to climate and disaster-risk information. Productive Alliances and the integration of smallholder producers into agri-food value chains should be supported to increase farmers' access to finance and markets, and the competitiveness of the sector more broadly.

**35 Finally, reaping the full benefit of the growth opportunities indicated by sectoral trends will require stronger institutional processes and stakeholder coordination,** as well as public investments in agriculture that are directed to the provision of public goods such as research, extension, and infrastructure rather than private goods like free inputs through subsidies. Global experience shows that public expenditures matter for increasing agricultural productivity growth. But not all public expenditures are productive—so what matters most is the allocative efficiency (quality of spending) and technical efficiency (effectiveness of spending). Coupled with an improved policy environment that crowds in private sector actors, the impact of public expenditures on agricultural productivity growth in Uganda would be even greater.

**36 The analysis that follows explores major thematic areas identified by MAAIF and MoFPED.** These thematic areas reflect the holistic perspective adopted for this review, which extends beyond analyses of trends in budget allocation and distribution (Chapter 3) to focus on the policy environment. For that reason, the analysis entails a synthesis of trends in public spending on agriculture in Africa (Chapter 2), a review of gaps between policy formulation and implementation, along with an assessment of the institutional environment and barriers to improving public spending in agriculture (Chapter 4), and an examination of the role of the private sector in providing public goods and services (Chapter 5). Based on that analysis, Chapter 6 provides conclusions and policy recommendations for improving the quality and effectiveness of public spending on agriculture in Uganda.



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# **SYNTHESIS OF PUBLIC SPENDING ON AGRICULTURE IN AFRICA**

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## 2.1 Rationale for Public Spending on Agriculture

**1** The rationale for public investments derives from two fundamental sources—economic inefficiencies caused by market failures and inequalities in the distribution of goods and services. Agricultural production is essentially a private enterprise, but production requires public goods and services that the private sector cannot provide efficiently. One characteristic of public goods and services is that they are non-excludable—if provided to one consumer, other potential beneficiaries cannot be prevented from enjoying them. A second is that they are non-rivalrous—meaning that consumption by one does not reduce the consumption of another. Non-excludability implies that potential beneficiaries cannot be charged for the goods or services, so the producer cannot capture their full social value. Non-rivalry implies that it is inefficient to charge anything for the goods or services, since the cost of supplying an additional unit (letting another consumer enjoy the benefits) is zero. These characteristics cause social and private returns to diverge, leading private investments to remain below the social optimum (Goyal and Nash 2017). That is why the public sector worldwide needs to play a pivotal role in the provision of public goods and services.

### 2.1.1 Correcting economic inefficiencies caused by market failures

**2** To guide decisions on areas appropriate for government spending, it helps to consider what kinds of goods and services are necessary to catalyze agricultural growth, and to what extent each is a “public good.” Public spending on agriculture is efficient if it is directed toward

generating knowledge (often in the form of technology), disseminating knowledge (technology), reducing transaction costs, and attracting private capital. These types of spending tend to provide goods or services that have public good characteristics and that are crucial for fostering robust growth in agricultural productivity and poverty reduction in rural contexts.

- **Generating knowledge.** Technology-advancing effects are associated with public spending on agricultural research and development (R&D) to create basic knowledge, which is both non-excludable and non-rivalrous. Sometimes the knowledge can be embodied in a commercial product (as with hybrid seeds and chemicals), with benefits that are excludable and rivalrous, but the basic knowledge itself is not. Therefore, investments in R&D are among the most important public goods and a critical component of public agricultural spending.
- **Disseminating knowledge and building human capital.** Effects that enhance human capital can be associated with public spending on extension, training, and information services that transfer knowledge and skills to those engaged in agricultural production. These investments create significant positive externalities through demonstration effects and peer-to-peer learning of benefits from adopting new productivity-enhancing technology. As agricultural production processes become increasingly knowledge intensive, with higher demand for precise and timely information, such investments become more important.
- **Reducing transaction costs.** Similarly, effects that reduce transaction costs can derive from public spending on soft and

hard infrastructure that might improve access to input and output markets. Transaction costs are an important determinant of market integration, and investments that lower the costs of searching for and exchanging information—and of bargaining, decision making, and enforcing contracts—tend to enhance market participation. Investments in rural roads, market information dissemination, and land market development, for example, are important in reducing transaction costs.

- **Attracting private capital.** The crowding-in effects of public agricultural spending on private capital occurs when public and private investments are complements in production. An example is public investment in large irrigation infrastructure, such as dams and canals, which then make it profitable for farmers to make small on-farm investments in water management and a wider range of production technologies.

## 2.1.2 Reducing inequality and poverty

**3** Public spending on agriculture is also justified on equity grounds, especially given the concentration of the poor in rural areas, most of whom rely primarily on agriculture for their livelihoods. One argument for fertilizer subsidies is that they could potentially help poor farmers break out of a low-productivity poverty trap. The equity justification for spending on agriculture is stronger for programs that can be targeted at the poor and for programs that demonstrate a high income-multiplier effect. For instance, impacts of spending on extension and advisory services are just

as progressive as those from several kinds of social spending (safety net programs), and they are far superior to spending on subsidies.

## 2.2 Level and Trends of Public Spending on Agriculture in Africa

**4** This section summarizes the key findings of the agriculture public expenditure reviews done in the last decade in 20 African countries.<sup>5</sup> By using a common methodology for compiling expenditure data, consistent with the CAADP guidance, the studies aimed to establish trends in spending and in the effectiveness of implementation. Although most of the studies were basic diagnostic analyses, the lessons have enriched technical discussions among practitioners and are being adopted by policy makers in many African governments.

### 2.2.1 The Malabo Declaration

**5** The Malabo Declaration (2014) on *Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods* reaffirms the central commitment of the Maputo Declaration (2003) to allocate 10 percent of public resources to agriculture. As discussed, in 2003 and again in 2014, African heads of state and government agreed that spending was far too low in agriculture. But in contrast to the Maputo Declaration, the Malabo Declaration contains many more commitments in areas like infrastructure, natural resources, land tenure, trade, and nutrition. It also specifies more clearly a range of commitments in agriculture, such

<sup>5</sup> Botswana, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of Congo, Ghana, Guinea, Liberia, Madagascar, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Togo, Uganda, and Zambia. These countries account for about 70 percent of agricultural value added in SSA.

as (1) doubling productivity by increasing irrigation and mechanization or curtailing post-harvest losses, among others; (2) sustaining at least 6 percent annual growth in agricultural GDP;<sup>6</sup> (3) establishing and/or strengthening inclusive public-private partnerships for at least five priority agricultural commodity value chains with strong linkage to smallholder agriculture; (4) creating job opportunities for at least 30 percent of the youth in agricultural value chains; (5) tripling intra-Africa trade in agricultural commodities; (6) reducing child stunting to 10 percent; and (7) ensuring that by 2025, at least 30 percent of farm/pastoral households are resilient to shocks. These areas are important to agriculture, but they are not (or not completely) under the mandate of the Ministry of Agriculture.

**6 While the Malabo-CAADP continues to focus on the agriculture sector, it also considers interventions in related sectors that are necessary for agricultural growth.** More inter-sectoral cooperation and coordination is seen as necessary and must be fostered through suitable and effective coordination frameworks, in particular with the Ministries of Finance and Economic Planning, National Planning Commissions, and other agriculture-related ministries (water, natural resources and environment, rural development). The National Agriculture Investment Plan (NAIP) remains the key vehicle for achieving the Malabo Declaration targets. The emphasis on implementation, delivery, results, and impact is increased.

**7 Under the Maputo-CAADP, the 10 percent allocation would be core funds in the NAIP, to be complemented by private investment.** However, this required the public expenditure to attract

private investment in the sector. It was also assumed that the 10 percent allocation would take the form of public *investment*, but in practice most public agriculture expenditure has continued to be in the form of *recurrent* expenditure (on salaries, rent, fuel, electricity, and telecommunications, for instance) and not investments (in post-harvest storage, feeder roads, and market and irrigation infrastructure, for example). To create conditions necessary for the private sector to invest in agriculture, the quality of public expenditure is of critical importance. One metric that is telling is the large ratio of recurrent to investment expenditure in the agriculture budget. Therefore, instead of arguing for increased budget allocation to agriculture (most of the countries still are below 10 percent), countries should first strive to increase the proportion of *investment* expenditure in their sector budgets.

**8 Given the objective of getting the biggest increase in the national budget, nothing is special about the 10 percent CAADP target for the agriculture sector.** However, the optimal distribution of public spending among sectors largely depends on many country-specific factors, including the share of the sector in the national GDP and its multiplier effects. To the extent that ministries of agriculture can demonstrate that their programs are an efficient and high-impact use of public funds, they can make a stronger case to ministries of finance and planning for increasing their budgets. In this case, enhancing the quality of spending is the first order of business. Nonetheless, the quantity of spending is a meaningful indicator of government commitment to agriculture. Therefore, it is worth considering how Africa compares to other regions, and to the Maputo and Malabo targets.

6 In Uganda, agricultural output has grown at only 2 percent per annum over the last five years, which is well below the population growth rate and below the 3-5 percent growth rates in other East African countries.

## 2.2.2 Public Spending on Agriculture

**9 The fundamental question is how much of the government budget should be devoted to the agriculture sector.** In principle, to maximize welfare on a given budget, spending should be distributed such that the marginal dollar in each activity yields the same increase in national welfare (however “welfare” is defined). If this were not true—if, for example, an additional dollar devoted to agriculture increased welfare more than the incremental dollar to non-agriculture spending—overall welfare could be increased by taking a dollar from non-agriculture and spending it on agriculture. How much welfare is increased by an incremental public dollar spent in agriculture depends on how much that dollar will increase agricultural production, as well as how much the additional production will increase welfare. This optimal allocation condition can be expressed in a ratio of spending in each sector. The optimal ratio of public spending on agriculture versus non-agriculture is equal to the ratio of the welfare elasticity of each sector’s production times the ratio of each sector’s elasticity of production with respect to public spending in the sector. The problem in operationalizing this allocation condition to provide practical guidance to policy makers is that it would require empirical estimation of all these elasticities (in every sector) for a given country.

**10 In the absence of a practical way to rigorously answer the question of how much public spending should be allocated to agriculture, there have been some efforts to provide rules of thumb, which may seem intuitive and reasonable.** For example, De Ferranti et al. (2005) show that with some special (and quite restrictive) simplifying assumptions, the optimal allocation is such that each sector’s

share of spending is its share of national GDP. This index—the share of spending on agriculture relative to agriculture’s share in the economy—is calculated for several Latin American countries over time to analyze whether there has been a systematic under-allocation or “anti-agricultural bias” in public spending, with the general conclusion that no such bias is present in Latin America.

**11 An alternative approach is to examine the experiences of countries that have undergone successful agricultural transformation.** Analysis of 12 East and South Asian countries during their periods of high agricultural growth—the Green Revolution—shows that, on average, these countries devoted around 10 percent of total public spending to agriculture. The Maputo-CAADP target is like what the Asian countries were spending on agriculture in that period. Likewise, the NEPAD’s target of spending 1 percent of agricultural GDP on research is quite like the level that Brazil devoted to its successful research agency, Embrapa, as well as the level of spending on research in some high-income countries.

**12 Countries differ greatly in the contribution of the agriculture sector to national GDP.** A 1 percent increase in agricultural production will therefore generally result in a smaller percentage increase in overall GDP in a country in which agriculture is 10 percent of the economy than in a country in which it is 30 percent. Thus, the elasticity of agricultural production with respect to spending in the sector will be higher in countries with high agricultural potential because of favorable natural endowments and if the overall policy environment is conducive to a positive supply response—and where the spending is “smarter.” In such countries, agriculture’s share of spending should be higher.

**13 Overall, Africa's level of spending on agriculture is lagging other regions based on several metrics.** Agricultural spending as a share of overall public spending—the metric used in the Maputo Declaration—is substantially lower in Africa than in other regions, particularly East Asia and the Pacific and South Asia. In 2014, only Burkina Faso, Malawi, Mozambique, and Zimbabwe had barely met or surpassed the 10 percent target (Malawi and Mozambique consistently surpassed it). Three countries—Niger, Rwanda, and Zambia—were close behind at 9 percent. Overall, the annual average share of agriculture in total spending in Africa is about 4.0 percent, and its annual growth rate is 0.8 percent (Table 2.1). Public spending on agriculture as a share of agricultural GDP in Africa is about 5.18 percent, substantially lower than in other regions. Spending per capita was on average US\$19, almost a third lower than that in the next lowest region, South Asia.

**Table 2.1. Trends in public spending on agriculture in Africa**

Main trends in spending	Estimate
Total agriculture spending in constant 2005 PPP\$, 1980 -2012	--
Annual average growth rate (%)	0.8
Annual average share in total spending (%)	4.0
Annual average share in agriculture value added (%)	4.7
Research spending in constant 2011 PPP\$, 1981 - 2011	--
Annual average growth rate (%)	-0.1
Annual average share in agriculture value added (%)	1.1

*Source: Benin 2015.*

*Note: PPP = purchasing power parity; -- = not available.*

**14 While almost all African countries are spending below the 10 percent target, country conditions and spending contexts differ widely across SSA.** For instance, the spending target is arguably less meaningful for such countries as South Africa and

Botswana, which have relatively small shares of agricultural GDP in the overall economy. An alternative indicator of the public budgetary commitment to agriculture—the Agriculture Orientation Index (AOI)—accounts for sector size to determine agriculture's share of public spending relative to its share in the economy. An AOI value of 1 would indicate that the government spends a share of its budget on agriculture exactly proportional to agriculture's contribution to GDP. Rarely would spending be allocated exactly in proportion to each sector's contribution to the economy. At the very least, however, large deviations would suggest the need for a deeper inquiry by policy makers.

**15 Analysis indicates that no country in Africa has an AOI of 1, although some come close.** There is a strong tendency for the countries with small agriculture sectors to devote proportionately more of the budget to supporting it (higher AOIs). Most African countries, however, spend much smaller proportions of the public budget on agriculture than the sector's share in the economy. Of the 47 countries for which the AOI has been computed, it is less than 0.3 in 31 countries. While the numerical goal of 10 percent is somewhat arbitrary and failure to meet this target is arguably not so worrisome, the AOI also appears to demonstrate underspending in most African countries. What is more worrying is that over the last three decades there has been a persistent negative trend in spending on agriculture in SSA.

**16 Agricultural R&D activities have high returns but are severely underfunded in most African countries.** Large countries in Africa have earned higher returns to R&D (an internal rate of return of 43 percent) than small countries (an internal rate of return of 17 percent), but even in small countries, returns were still high enough (higher than discount rate of 10 percent) to justify the

investments (Table 2.2). In 2006, the NEPAD set an additional target to increase public spending on agricultural R&D to at least 1 percent of agricultural GDP, a target that few African countries have met. Most high-income countries spend around 1 percent of their agricultural GDP on research, as does Brazil, a country widely regarded to have an effective research agency, Embrapa. Over the last decade, spending on agricultural research constituted about 0.4 percent of agricultural GDP in SSA, compared with 1.3 percent in Latin America and the Caribbean, 0.6 percent in East Asia and the Pacific, and 0.9 percent in South Asia. Africa was the only region where agricultural research spending fell on average over this period.

## 17 Spending on R&D has driven agricultural transformation in the rest of the world.

For example, during periods of rapid growth, Brazil, China, and India invested heavily in

agricultural research, with their collective share in developing country public spending on agricultural R&D rising from one-third in 1981 to almost half in 2000 (Alston et al. 2000; Pardey et al. 2007). In SSA as well, investments in national and international agricultural research have been demonstrated to be among the most important determinants of long-term productivity growth. For example, the Consultative Group on International Agricultural Research (CGIAR) has played an important role in raising agricultural productivity growth in SSA. Spending by the CGIAR in the region has generated US\$6 in benefits for every dollar spent on research in Africa. Returns to spending by national agricultural R&D agencies have been relatively lower but still significant, averaging about US\$3 in benefits for every US\$1 spent.

**Table 2.2. Returns to agricultural research in sub-Saharan Africa**

Countries	Returns to agricultural research		
	Benefit-cost ratio	IRR (%)	IRR (%) without CGIAR
<b>Large countries</b> Côte d'Ivoire, Ethiopia, Ghana, Kenya, Nigeria, Sudan	4.4	43	36
<b>Midsize countries</b> Madagascar, Mali, Mozambique, Senegal, Uganda	2.6	29	23
<b>Small countries</b> Botswana, Burundi, Gabon, The Gambia, Swaziland	1.6	17	13

Source: Fuglie and Rada 2013.

Note: The benefit-cost ratio discounts future benefits at a yearly rate of 10 percent. CGIAR = Consultative Group on International Agricultural Research; IRR = internal rate of return.

## 18 Following the public expenditure reviews, some countries have increased public expenditures, at least in nominal terms.

Where the effort to increase public investment in agriculture has been successful, an emerging concern is whether current expenditure has grown in tandem to ensure that the operations and maintenance of the assets created are adequate to sustain

the investments. All along, the reviews have emphasized the need to improve the quality of spending (allocative efficiency) and impact (effectiveness) at any level of resource allocation to the sector. The next section discusses some of the recommended measures to improve the quality and impact of public spending in agriculture.

## 2.3 Improving the Quality of Public Spending to Maximize Returns

19

Not all public spending on agriculture is productive—that is, efficient and effective. Public spending on agriculture may be unproductive or even reduce the productivity of other spending for two basic reasons. First, governments sometimes spend on things that are not public goods, such as subsidies. In such cases, governments tend to be inefficient suppliers of private goods, and when they enter these markets, there is a serious risk of displacing the private sector. Second, even when there are clear market failures, government spending will not necessarily improve the situation. Empirically, public spending on public goods has typically been much more productive than public spending on private goods (López and Galinato 2007). To maximize returns on agricultural investments, Africa should spend its relatively meager resources efficiently and effectively. Essentially, this means investing in areas that generate higher impacts, such as R&D, irrigation, and extension services (Table 2.3).

**Table 2.3. Impacts of different types of public spending on agriculture in Africa**

Estimated impacts of spending	Estimated impact
Total agriculture elasticity	0.1–0.3
National and CGIAR research, ROR (%)	22–55
Irrigation, ROR (%)	11–22
Extension, ROR (%)	8–49
Extension, benefit-cost ratio	6.8–14.2
Rural roads, benefit-cost ratio	7.2

Source: Benin 2015.

Note: CGIAR = Consultative Group on International Agricultural Research; ROR = rate of return.

### 2.3.1 Investing In Land Governance

20

One key public good that is greatly undersupplied across Africa is the legal and institutional framework for land governance. Only about 10 percent of rural land in Africa is registered. The rest is undocumented or held under informal arrangements that make it vulnerable to “land grabbing” or expropriation, a particular problem for women. It takes twice as long (65 days) and costs twice as much (9.4 percent of the property value) to transfer land in SSA than in Organization for Economic Co-operation and Development (OECD) countries (31 days; 4.4 percent). Ghana, Kenya, and Uganda, for example, all have fewer than 10 land surveyors per million people, compared with 197 in Malaysia and 150 in Sri Lanka (Byamugisha 2013). These conditions undermine land market development and secure tenure, weakening incentives to make on-farm investments and impeding rural credit market development. Because significant investments in land quality are needed to reverse soil degradation and depletion, improving land security is hugely important to create conditions for sustainably boosting productivity. Many SSA countries either have legislation in place or initiatives underway to address communal land rights and gender equality, the basis for sound land administration.

### 2.3.2 Strengthening Extension Services

21

Another crucial element in making spending decisions to encourage greater adoption of modern technologies is to improve the effectiveness of extension services. Particularly where information constraints are a major bottleneck in the uptake of modern inputs and production techniques, public funding (although not necessarily provision) of extension can be a

cost-effective use of public funds. Moreover, higher returns to investments in agricultural extension are expected if the rate of developing new technologies for SSA is increasing, enabling farmers to adjust more quickly to changing circumstances.

**22 Extension services are coming back onto the development agenda, and in a few countries, they now receive substantial shares of the budget.** The rapid adoption of digital technologies in rural areas promises to revive some aspects of extension services and consequently to improve productivity. Innovative models are being implemented in SSA, led by Kenya and Nigeria. New tools and approaches have helped overcome information problems that hinder market access for many small-scale farmers, promote knowledge and skill development, and stimulate opportunities for agricultural supply chain management (Deichmann, Goyal, and Mishra 2016). In funding the new generation of extension programs, lessons from the past need to be considered to achieve a better balance in spending across subcategories (wages and non-wage recurrent expenditure) and make extension more effective, particularly in reaping the benefits from irrigation and water harvesting technologies.

### 2.3.3 Increasing Infrastructure For Irrigation, Post-Harvest Management, And Marketing

**23 To transform African agriculture, it is critical to invest in irrigation, post-harvest management, processing, rural roads, and market infrastructure.** A large literature on the impacts of investments to improve market access for farmers has found that benefits are significant, come in different forms, and can be realized. Irrigated area as a share of total cultivated area is

estimated at 6 percent for Africa, compared with 37 percent for Asia and 14 percent for Latin America. Food production in Africa remains almost entirely rainfed, despite highly variable and in many cases insufficient rainfall, together with an increasingly high incidence of severe drought. The potential for profitable irrigation development for SSA remains large, given the existing water resources, the high value of irrigated agriculture on the continent, and the large number of rural-poor, who could benefit from the productivity improvements that result from irrigation.

**24 The returns to many irrigation projects in the past were relatively low in Africa, and the negative externalities were high.** But recent advances in planning and design techniques have provided the ability to minimize adverse environmental and social consequences of large irrigation infrastructure. Recent studies show that irrigated land can be expanded from 13 million hectares to 24 million hectares in economically viable ways, with returns ranging from 17 percent for large-scale irrigation to 43 percent for small-scale irrigation (You et al. 2011). Africa has significant unexploited potential to develop both large- and small-scale irrigation, but economic viability depends on keeping costs down. Although there is significant potential for rehabilitating existing irrigated areas in SSA, the expertise, knowledge, and capacity to manage irrigation investments are low (Rosegrant, Ringler, and Zhu 2009).

**25 Spending on rural roads has significant effects on poverty and agricultural productivity overall.** Reduction in transport costs reduces both trade costs and interregional price gaps (Casaburi, Glennerster, and Suri 2013). The spillover effects are that farmers pay less for their inputs and get more for their outputs, increasing incomes (Chamberlin et al.

2007; Stifel and Minten 2008). This type of infrastructure investment is particularly critical in Africa, where less than half of the rural population lives close to an all-season road. Trader surveys in Benin, Madagascar, and Malawi find that transport costs account for 50–60 percent of total marketing costs (Dercon et al. 2008; World Bank 2008). Higher profitability from road access also increases the value of farmers' land. Not surprisingly, access to markets facilitates economic diversification in rural areas and creates incentives for smallholder farmers to adopt modern production technologies.

### 2.3.4 Shifting Government Spending From Private To Public Goods

26 Research from Latin America and the Caribbean finds that it is crucial to shift public spending away from providing goods and services (to specific groups of producers) and toward the increased provision of public goods. A reallocation of 10 percentage points of public expenditures from subsidies to public goods would increase per capita agricultural income by about 2.3 percent without increasing total spending (López and Galinato 2007; Valdes 2008). These findings from cross-country analysis for Latin America are consistent with the analysis for Asia, where spending on rural infrastructure, agricultural research, and dissemination had large poverty alleviation effects. Governments in Africa and other developing regions have invested heavily in state-owned enterprises (SOEs), or parastatals, to perform commercial functions that the private sector generally performs more efficiently, which has crowded out private investment and dragged down overall sector performance. While this situation has improved over time, SOEs are still more involved than they should be in the agriculture sector, particularly in marketing inputs and outputs.

### 2.3.5 Implementing Policy Reforms Necessary For Agricultural Transformation

27 Agricultural transformation and poverty reduction in Africa will also require policy reforms. Many parts of Asia have achieved impressive gains in agricultural productivity and poverty reduction over the past half-century due to policy reforms. By contrast, sustained productivity growth remains elusive in most African countries. Spending on productive investments related to the development and diffusion of technological improvements, greater connectivity in rural areas, and irrigation development has done the most to reduce poverty. In India, the relative performance of subsidies evolved over time—returns were higher in the early years of the Green Revolution and declined rapidly thereafter. Fertilizer, power, and irrigation subsidies were among the least significant contributors of poverty reduction over the four decades. These findings provide potentially important implications for enhancing agricultural growth and poverty reduction in Africa. There are strong reasons to believe that the policy reforms and investments that generated high payoffs in Asia can drive growth and reduce poverty in Africa as well.

28 Recent research has quantified the potential improvement in productivity from policy reforms and several kinds of spending on agriculture. While comprehensive development of Africa's agriculture sector requires investments across multiple areas, a TFP decomposition (Table 2.4) shows that productivity improvements in Africa have been led by investments in development of new technologies (contributing 51 percent of TFP), policy reforms that improve terms of trade and provide economic incentives to farmers (20 percent of TFP), and wider

adoption of new technologies (proxied by farmer education—8 percent of TFP).

**Table 2.4. Drivers of agricultural productivity in sub-Saharan Africa**

Type of investment	Contribution to cumulative TFP growth (%)
Agricultural research and development	51
Improvement in agriculture's terms of trade with market and trade policy reform	20
Reduction in conflict	18
Increase in farmer education	8
HIV/AIDS therapy to adult population infected	2

Source: Fuglie and Rada 2013.

Note: HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; TFP = total factor productivity

### 2.3.6 Targeting Spending To Reduce Poverty

**29** There is considerable scope for financing investments that have higher impact on reducing poverty. Rural roads and irrigation infrastructure can be geographically targeted at areas where there are concentrations of poverty. Research can be aimed at crops, livestock, and technologies that are likely to be most useful to the poor rather than to plantation export crops. Efforts to connect farmers to markets can be focused on smallholders. Analysis shows that such investments have a large payoff in both economic growth and poverty reduction.

### 2.3.7 Addressing Emerging Priorities Arising From Climate Change

**30** Public spending will need to remain flexible to cope with future challenges, and for agriculture, probably no emerging challenge is more urgent than climate change. It is a threat for agriculture across the world, but the lack of resilience of

poor farmers makes it particularly serious in SSA. Projections show yield decreases in the near term of 5 percent, potentially growing to 15–20 percent across all crops in SSA by the end of the century (World Bank 2014). Agriculture is also an important contributor to greenhouse gas emissions, particularly from deforestation, and Africa is the only region where the majority of production increases have come from expanding cultivated area, generally at the expense of forests.

**31** In Africa, as around the world, a more climate-resilient agriculture is needed to achieve the triple win of enhancing agricultural productivity, mitigating emissions of greenhouse gases, and helping farmers adapt to climate change. Most investments to mitigate climate change (promoting low-carbon growth) and adapt to it (building resilience) will need to be made by farmers and other private agents. Even so, proactive government policies, planning, and investments are required to provide information, incentives, and an enabling environment to encourage communities, households, and the private sector to change their behaviors and investment choices. Many climate-resilient investments will not be very different from productive investment choices.

**32** For public spending priorities, climate-smart agriculture entails using landscape-scale approaches to invest in managing climate risks. Such approaches could include developing drought or flood-resistant technologies, understanding and planning for transitions to new adapted cropping and livestock systems and livelihood options, and reducing greenhouse gas emissions from livestock practices and land use changes that cause deforestation and losses of biomass and soil carbon. Increasing resilience, restoring degraded lands, and managing ecosystem services better will play

key roles in all of these options. Efforts to craft budgetary and policy choices to create a more climate-smart agriculture will have to cope with special challenges rooted in many uncertainties, distributional issues, and the long-term nature of the problem.

### **2.3.8 Reducing The Current Excessive Focus On Unproductive Fertilizer Subsidies**

**33** The resurgence of input subsidy programs in Africa has arguably been the region's most important policy development for public agricultural spending in recent years. For example, 10 African governments<sup>7</sup> spend roughly a total of US\$1.2 billion annually on input subsidies, primarily on fertilizers. These programs were almost phased out in the 1990s, during a period of structural adjustment in Africa, but they have made a strong comeback. Their return is partly due to residual support for subsidies among African leaders, even while pressured to phase them out, and partly to the uncertainties about food supply during the 2007–08 global food and fertilizer price instability. Input subsidies continue to be vastly popular among African politicians as a way to support their constituents.

**34** The economic rationale for fertilizer subsidies comes mainly from the motivation that, because of credit and information constraints, fertilizer use is suboptimal in most of Africa. The subsidies could overcome these problems by reducing the costs that farmers incur and the barriers of affordability, access, and learning. This justification is often based on the fact that fertilizer is used much less intensively in Africa than in other regions, particularly Asia, and that fertilizer use in demonstration plots provides high returns. But on the demonstration plots, crops are grown under

conditions much closer to optimal than in most farmers' fields, with better soil and more plentiful water. In much of Africa, however, water management is scarce, and soil has been degraded, greatly reducing the responsiveness of crops to higher chemical fertilizer use (Christiaensen and Kaminski 2015). The policy discussions of low productivity in Africa tend to overemphasize fertilizer use and underemphasize the poor farming practices (agronomic) and rainfall conditions that limit African farmers' ability to use fertilizer as profitably as in other regions (Jayne et al. 2016). But analysis indicates that economic policy reforms (which can increase TFP by 4.7 percent) and investments in R&D (which can increase TFP by 3.4–4.1 percent) have the greatest impact in raising agricultural TFP in SSA (Table 2.5).

**35** The evidence from the high agricultural growth periods in South Asia shows that fertilizer subsidies played little or no role in substantially boosting productivity (Fan, Gulati, and Thorat 2008; Gautam 2015). Studies in four Asian countries—Bangladesh, India, Indonesia, and Pakistan—conclude that fertilizer subsidies were not significant in farmers' adoption of technology. They instead identify R&D of new technologies, irrigation expansion, and other investments, such as roads, as the main drivers (Rashid et al. 2013; Smith and Urey 2002). At the height of the Green Revolution, farmers in three of the four countries (not in Bangladesh) were net-taxed for fertilizer (that is, domestic prices for fertilizers were higher than the world market price), indicating that it was profitability and not subsidies that drove technology adoption during this era (Rashid et al. 2013).

<sup>7</sup> Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mali, Nigeria, Senegal, Tanzania, and Zambia.

**Table 2.5. Factors affecting agricultural productivity**

Type of investment	Simulated increase in TFP (%)
Doubling spending on international research	4.1
Doubling spending on national research	3.4
Economic policy reforms	4.7
Doubling irrigation investments	2.9
Improving labor force schooling	1.3
Stopping the spread of HIV/AIDS	2.1
Stopping armed conflicts	0.5

Source: Fuglie and Rada 2013.

**36** Several SSA countries have recently implemented changes (or input subsidy policy reforms) to improve the efficiency and effectiveness of their input subsidy programs. Countries have replaced public with private procurement and delivery mechanisms, and even put in place electronic delivery systems for subsidies (as in Nigeria). These appear to be steps in the right direction. But there is no rigorous empirical evidence to assess whether these changes have significantly improved the performance of the programs. Even "smart" input subsidies have seldom produced benefits commensurate with their fiscal costs, but they remain politically attractive. Where subsidies continue to be used, they should at least be reduced to a modest amount in national agriculture budgets, with a clear exit strategy. In the longer term, no program will sustainably raise fertilizer use until it becomes profitable for farmers to buy fertilizer on commercial markets after they graduate from the subsidy program.

### 2.3.9 Deploying Alternative And Complementary Investments To Complement Policy Reforms

**37** In areas where fertilizer or other modern production technologies are actually underused, many alternative investments can be used to encourage greater uptake. Alternative policy options can be deployed depending on the prevailing constraint. If the main bottleneck is that farmers have few choices of appropriate input technologies for the main agroecological systems in a country, the best solution may be to focus on regulatory reform to encourage spillovers from abroad and investment in domestic research. If the problem is a lack of information on the part of farmers, extension services may be the best policy lever. If one of the underlying causes for low fertilizer use is insufficient cash flow for farmers to buy inputs, then efficiently promoting the emergence and growth of rural credit markets would address this constraint. Much can be done by using innovative ways of providing credit that take advantage of new applications of digital information technologies.

**38** In terms of complementary investments, creating demand for fertilizers in Africa will require lowering the farm gate prices, where they are higher relative to other regions. This has clear implications for government spending priorities: spending needs to be aimed at streamlining logistics and reducing costs and risks in fertilizer supply chains (Jayne et al. 2013). Much of this investment is most appropriate for the private sector, but governments can support the effort by improving the infrastructure for fertilizer distribution, reducing regulatory barriers, and improving profitability through reduced transport costs.

**39** Other steps required to stimulate demand for fertilizer are to enhance research and extension, and to invest in soil analysis and mapping (to improve soil fertility management to raise fertilizer response rates). Input promotion during the high agricultural productivity periods in Asia and South America, for example, addressed systemic constraints to productivity through integrated investments in new technologies, extension support, irrigation, and market linkages. Countries in SSA could get a bigger impact within the existing expenditure envelope by moving away from a heavy focus on fertilizer subsidies toward a package of complementary investments. Reforming the design and implementation of these subsidy programs while rebalancing government spending in favor of high-return core public goods (Table 2.3) and policies (Table 2.4) could produce massive dividends.

**40** Efficient allocation of resources for greater impact begins with the improvement of budget management processes. The reviews of public expenditure in the 20 African countries highlighted the importance of aligning agriculture sector policies and strategies with the investment plans, MTEFs and annual budgets as the first step to technical efficiency in spending. The next section summarizes the key recommendations on improving budget management processes in African countries.

## 2.4 Improving Budget Management Processes

**41** Another dimension of a strategy to maximize impacts of public spending in agriculture is ensuring that the budgetary process supports efficient implementation. There is considerable variance in budget preparation and execution capacity among countries, but there is undoubtedly scope for improvement.

### 2.4.1 Improving Budget Planning And Management

**42** Budgeting needs to start from a stronger foundation of sector strategies and national agricultural investment plans, few of which currently provide much guidance on budget preparation. The investment plans need to give more detailed and quantitative guidance on translating recommendations into spending priorities, and adjustments from the most recent implementation period need to be accompanied by a monitorable results framework. In many countries, the rate of budget execution is dismal. Improving budget execution rates is essential for demonstrating that the sector can make good use of additional public resources, and for persuading ministries of finance that their budgets must be increased. For resources to be used effectively, the focus must be on improving the implementation of development expenditures, the predictability of releases from ministries of finance, the procurement planning and implementation system, and the budget information management systems to inform within-year budget implementation.

### 2.4.2 Strengthening Budget Monitoring And Evaluation

**43** Countries need to strengthen monitoring and evaluation (M&E) capacity as part of accountability systems that shift resources toward effective spending. Ministries of agriculture need more resources and staff doing M&E, and in exchange they need to be held accountable for demonstrating that budgets are efficiently and effectively spent. Ministries of agriculture need to increase recurrent spending for this purpose. Budget analysis capacity has to be established in the sector

ministries for expenditure monitoring and adjustment within the budget year. Budget information systems appear to be improving with the expanded rollout of computerized systems by ministries of finance and accountant general offices.

### 2.4.3 Capturing Off-Budget Financing

**44** Ministries of finance need to put in place budget information systems that, in some form, capture off-budget external partner financing of projects that deliver public goods and services, which in some countries is a significant share of the budget. Two fiscal management reforms that can significantly improve the technical efficiency of expenditure management are implementing a treasury single account system and a centralized civil service information system.

### 2.4.4 Shifting To Program Budgeting And Building Local Capacity

**45** Two other aspects of budget processes are likely to grow in priority but require attention over several years to build the capacity for improving the quality of budget outcomes. The first is a shift to program budgeting, as some countries have committed to do. Backward-looking reconfiguration of sector public spending by program categories to provide the recent history of composition and trends helps benchmark the programs and the specifics of their expenditure foundation. The second aspect of budget processes that is likely to grow in priority is the decentralization and deconcentration of government functions in terms of the administration and fiscal management. This trend flags the importance of building expenditure implementation capacity at the local level, and in the case

of decentralization, of expenditure planning capacity as well. Where the momentum of decentralization and deconcentration is accelerating, budget information systems and information sharing need to be developed across all levels of government, to enable budget planning that leverages potential synergies and avoids duplication in sector spending.

### 2.4.5 Rationalizing Recurrent Spending

**46** Some countries seem to be underfunding certain categories of recurrent expenditures. In some countries, despite a significant scaling-up of public spending on the sector, there has been no or little increase in some core administrative functions. Examples of public functions that involve mainly recurrent expenditures and appear to be underfunded are maintenance, core budget planning and implementation, M&E, and sector regulatory functions. Underfunding budget planning and M&E capacity in ministries reduces the quality and impact of public spending on agriculture. Inadequate support to undertake project M&E reduces the ability to track results and adjust to improve impacts or reorient approaches. Similarly, underfunding recurrent goods and services that are necessary to maintain capital investments can adversely impact sector performance. Recurrent budget planning is typically conducted as an incremental adjustment to prior year levels. Yet significant policy shifts, such as expanding reliance on private markets for input provision, do not appear to be accompanied by funding regulatory capacity for input quality in markets, a recurrent function.

## 2.5 Conclusions

- 47** Irrespective of spending targets, the evidence shows that countries in SSA have consistently lagged countries in other developing regions in the quantity and quality of public agricultural spending. Nevertheless, raising the volume of spending requires political consensus—among development partners, government decision makers (particularly ministries of finance), and above all electorates—that money invested in agriculture will be well spent. Measures to raise the efficiency of existing spending in agriculture—and demonstrating that it has a high impact on growth and poverty reduction—will make the case for higher levels of spending much more persuasive.
- 48** The key recommendations to (1) improve the quality of spending, and (2) strengthen the institutional capacity for better management of budget processes, together with the foregoing conclusions, are relevant for Uganda. The analysis in the next chapter focuses directly on Uganda, highlighting the trends in levels, composition, and efficiency of spending in the agriculture sector. The analysis attempts as far as possible to benchmark the Uganda's performance with the NEPAD/CAADP targets and in relation to selected African countries. Additionally, where possible, Uganda's performance will be compared with the performance of other developing countries in Latin America, East Asia, and the Pacific.



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# **UGANDAN AGRICULTURAL PUBLIC EXPENDITURES: LEVEL, COMPOSITION AND EFFICIENCY**

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**1 This chapter examines public expenditure in the agriculture sector (PEAS) in Uganda between 2013/14 and 2017/18.** The analysis delves into the level and composition of strictly on-budget (domestic and donor or external sources of funds) expenditures using the World Bank Agriculture Sector Expenditure Public Expenditure Review Methodological Note (World Bank 2018a). Section 3.1 summarizes the data sources and methodology. Note that donors account for substantial off-budget spending in the agriculture sector in Uganda, which is not captured in this analysis, because information on off-budget expenditures (estimated to be 10–20 percent of the total sector budget) is fragmented, difficult to obtain, and largely ignored by planners and policy makers. Another type of spending that is not captured in the analysis is the significant spending by non-governmental organizations and the private sector (agribusinesses), conservatively estimated at about 10 percent of the total sector budget. That spending poses additional problems for coordinating and harmonizing the agriculture sector budget.

**2 The analysis focuses on public resources expended on the agriculture sector by a number of agencies at the central and local government levels.** At the national level, MAAIF is the lead ministry responsible for the agricultural expenditures, along with six semi-autonomous government agencies (SAGAs): (1) NARO, (2) the NAADS Secretariat, (3) the Uganda Cotton Development Organization (UCDO), (4) the Uganda Coffee Development Agency (UCDA), (5) the Dairy Development Authority (DDA), and (6) the National Animal Genetic Resource Centre and Data Bank (NAGRC&DB). But there are also agriculture-related expenditures under the Office of the Prime Minister (OPM); the Ministry of Local Government (MoLG); the Ministry of Water and Environment (MWE); the Ministry of Lands, Housing and Urban

Development; the Ministry of Trade, Industry and Cooperatives; the National Forestry Authority (NFA); and the Uganda Exports Promotion Board (UEPB). At the local level, the District Production Offices spend on agriculture activities as well.

**3 A crucial element in enhancing agricultural productivity growth is improving the provision of productive investments through more and better public spending in the sector.** The expectations that high-quality public spending can bolster growth have been recognized by MAAIF and MoFPED, and over the years they have intensified efforts to improve both the level (quantity) and quality (effectiveness) of public spending. There are significant differences in the rates of return to different categories of agricultural spending. Many studies find quite low returns to aggregate spending in agriculture. But almost all find high returns to specific types of spending, such as investments in core public goods related to technology generation, diffusion, market links and infrastructure (Goyal and Nash 2017). In some countries, a large part of the public spending in agriculture goes to low-return activities, dragging down overall returns relative to what they could have been if resources were allocated to the higher-return activities.

**4 Although additional public spending is required for agriculture in Uganda, two important points must be borne in mind.** First, the current level of spending is consistent with Uganda's narrower fiscal space (as discussed in Section 3.1) and its greater need to invest in infrastructure and human development. Second, international experience shows that lower public spending does not necessarily amount to lower agricultural competitiveness, but inefficient spending does. For example, the large farm subsidies (spending on private goods) in the United States and

European Union have failed to keep farmers competitive internationally, while the modest public expenditures (spending on public goods such as research and development, extension and advisory services, as well as regulatory aspects) on agriculture in Brazil, Australia, and New Zealand have not prevented farmers in those countries from being highly competitive on world markets.

**5** **The importance of getting the greatest impact from public spending in agriculture is further amplified by competing national priorities.** Increasingly there is competition for budgetary allocation between agriculture and other key sectors of the economy, including education, health, and infrastructure (energy, transport, water), which are also critical for the overall growth, national development, and poverty reduction. Even though budget will shift to other areas, notably infrastructure and human development, these shifts will indirectly benefit the agriculture sector (by helping to reduce transportation costs, increase access to markets, reduce post-harvest losses, and increase value addition through agro-processing). Under the decentralization policy, within the agriculture sector budget itself, resources are expected to continue to shift from the central (MAAIF and its agencies) to the local government level. "Given this outlook, it is more critical than ever to ensure that scarce budgetary resources are used in a highly efficient and effective way at all levels in the sector".

**6** **MAAIF and MoFPED recognize that increasing the volume of public spending in agriculture will be necessary but not sufficient to spur sector transformation and poverty reduction.** Spending is allocated efficiently when it is used to support the delivery of public goods (instead of private goods, such as subsidies) that are most capable of spurring inclusive agriculture sector growth (doing the right things). As

discussed in Chapter 2, public spending on agriculture is efficient if it is directed toward generating knowledge (often in the form of technology), disseminating knowledge (technology), reducing transaction costs, and attracting private capital. Deliberate actions are therefore needed to improve the efficiency and effectiveness (quality or impact) of public spending.

**7** **This analysis examines the efficiency (making the best use of inputs to provide outputs in the form of public services) of public spending in agriculture from several angles.** It investigates *administrative* efficiency by looking at the distribution of sector spending across administrative units (central and local governments) at different geographic (regional) levels; it looks at *technical* efficiency (doing things well) by considering institutional aspects (capacity to better plan, manage and execute the budget); it explores *economic* efficiency by analyzing trends in recurrent (wage bill and non-wage bill) and development (current and capital outlays) spending; and it examines *functional* efficiency by looking at the composition of spending across various functions (infrastructure, R&D, extension and advisory services, regulatory services).

### 3.1 Data Sources and Methodology

**8** **The analysis for this Uganda AgPER relied on data provided by MoFPED and drew on two sources:**

- i. The MoFPED/World Bank BOOST public expenditure database, April 2018 version, which covers 2003/04–2016/17. For 2016/17, only budgeted amounts are available in the database.
- ii. IFMS budget data from MoFPED for 2016/17 (includes both budgeted amounts and expenditures) and 2017/18 (includes budgeted amounts only).

**9** These two data sources were combined to compute the PEAS indicators for 2013/14–2017/18. The combination of the BOOST and MoFPED datasets resulted in a single Excel raw data file containing about 127,000 lines of budget data. The analysis used 20 core variables extracted directly from the BOOST and MoFPED database.<sup>8</sup>

**10** Four more variables were constructed, as follows:

- i. **Scope**: a variable that specifies whether the expenditure line is considered as PEAS or not (included/excluded).
- ii. **Subfunction**: all expenditure lines that qualify as PEAS are mapped to a set of categories describing subfunctions, such as subsidies, research, extension, infrastructure, and so on.
- iii. **Subsector**: all expenditure lines that qualify as PEAS are mapped to a set of subsector categories, namely livestock, cash crops, crops (general), forestry, and fisheries.
- iv. **Commodity**: all expenditure lines that qualify as PEAS are mapped either to single commodities, commodity groups, or “all commodities.”

**11** Data gaps and implications are summarized in Table A2.1 in Annex 2. The most critical data gaps are: (1) the geographical mapping of expenditures in the data sources was not fit for the purposes of the analysis; and (2) no disaggregated expenditure data were available for Operation Wealth Creation (OWC).

**12** The analysis draws on an approach to reviewing PEAS that builds on previous work done by African governments in collaboration with the World Bank, the Food and Agriculture Organization (FAO), and the African Union (AU) (World Bank 2011; MAFAP 2015; AU 2015). In this analysis, the perimeters of expenditure considered as PEAS are delineated and defined by four characteristics: time, functions, administrative units, and economic categories. According to the International Monetary Fund (IMF) Government Finance Statistics (GFS) manual, a functional classification of expense “provides information on the purpose for which an expense was incurred” (IMF 2014). The functional core perimeter of agriculture thus defines what is considered as an expenditure whose function is to support agriculture directly. Expenditures that support agriculture indirectly (through positive externalities or long-term impact) are not included in the functional perimeter.

**13** The functional perimeter is based on the Classification of the Functions of Government (COFOG). The COFOG is a functional accounting system developed by the Organization of Economic Co-operation and Development (OECD) and the United Nations Statistics Division. It classifies public expenditure by “functions or socioeconomic objectives that general government units aim to achieve” (IMF 2014). This perimeter is further disaggregated into a sub-functional perimeter, using the methodology for analysis of public expenditure on food and agriculture of the Food and Agriculture Organization (FAO). The methodology developed by FAO’s Monitoring and Analyzing Food and Agricultural Policies (MAFAP) program offers sub-functional categories which are labelled “COFOG-compatible”; that is, they can fall within

8 The whole set of variables can be found in Uganda’s BOOST database at [boost.worldbank.org/country/Uganda](http://boost.worldbank.org/country/Uganda).

the COFOG perimeter (MAFAP 2015). The detailed description of the data sources and methodology for analyzing the levels and composition of public expenditures in the agriculture sector in Uganda are provided in Annex 2.

### **3.2 Level of Public Expenditure in Agriculture**

**14** **Recognizing the sector's importance for the national economy, the Government of Uganda (GoU) remains committed to funding agriculture.** The GoU signed the African Union's Maputo Declaration in 2003, thereby committing to allocate at least 10 percent of its public budget to agriculture. It renewed this commitment in the 2014 Malabo Declaration. The 2010 Uganda CAADP Compact<sup>9</sup> underlines the necessity of meeting the 10 percent target to achieve a 6 percent growth rate in annual agricultural GDP, which is also an objective of the Malabo Declaration. The ASSP 2015/16–2019/20 indicates that Members of Parliament adopted a resolution in 2011 that would increase the share of agriculture in the public budget to 7 percent in 2012/13, and up to 10 percent thereafter. The ASSP notes that significant scope exists to scale up public expenditures on agriculture to meet the set 10 percent target.

**15** **Despite this commitment and vigorous increase in recent years, PEAS in Uganda has fallen short of the 10 percent target of total public spending.** Table 3.1 outlines the main economic and spending indicators for the agriculture sector in relation to the national economy. The PEAS, measured both in nominal and relative terms, increased markedly between 2013/14 and 2017/18

(growing at an average of 20 percent per annum), both in absolute values and in per capita terms. The spike observed in 2016/17, an electoral year, also coincides with the end of the Agriculture Sector Development Strategy and Investment Plan (DSIP) 2010/11–2014/16 and the introduction of the new ASSP 2015/16–2019/20. Nonetheless, PEAS remained, on average, at about 3.6 percent of total public spending, much below the target. Uganda is not unique, however; in 2014, only Burkina Faso, Malawi, Mozambique, and Zimbabwe had barely met or surpassed the 10 percent target (Malawi and Mozambique consistently surpassed it). Three other countries—Niger, Rwanda, and Zambia—were close behind at 9 percent. Overall, the annual average share of agriculture in total spending in Africa is about 4.0 percent, and its annual growth rate is 0.8 percent.

**16** **"The low prioritization of the sector in public spending contrasts sharply with the weight of agriculture in the Ugandan economy",** given that agriculture accounts for around one-quarter of national GDP and about 70 percent of employment. Again, this fact is not surprising, as most African countries spend much smaller proportions of the public budget on agriculture than the sector's share in the economy. Public spending on agriculture as a share of agricultural GDP in Africa is about 5.18 percent, substantially lower than in other regions of the world.

**17** **General and annual trends also hold true in constant terms.** Table 3.2 replicates some key PEAS indicators in constant terms. As previously shown, PEAS spiked in Uganda in 2016/17, after stagnating in 2013/14–2015/16. Expressed as spending per rural inhabitant, the level of spending on

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<sup>9</sup> CAADP is the Comprehensive Africa Agriculture Development Programme, a pan-African policy framework to promote agriculture sector growth and economic development. More than 40 African Union Member States have signed CAADP compacts, and more than 30 have developed national agriculture and food security investment plans. See (<https://www.nepad.org/caadp>).

agriculture increased considerably in 2016/17 but did not extend into 2017/18. The increase of PEAS in 2017/18 was lower than the increase in total PE, pushing shares of PEAS in the total budget down again.

**Table 3.1. Main PEAS indicators (nominal USh billions)**

	2013/14	2014/15	2015/16	2016/17	2017/18	Average	Average growth rate
Budgeted PEAS	716	776	711	1,228	1,337	954	20%
Final PEAS	408	417	467	971	.	565	41%
Final PEAS per capita (USh)	16,957	16,774	18,146	36,460	.	.	36%
Final PEAS per rural capita (USh)	13,733	13,678	14,915	30,240	.	.	37%
Budgeted PE	14,033	15,767	23,977	26,251	29,009	21,807	21%
Final PE	9,701	12,114	16,643	24,098	.	15,639	36%
Agricultural GDP	17,371	18,350	19,655	22,744	25,343	20,693	10%
GDP	69,276	76,517	82,903	91,351	97,666	83,543	9%
Share AgGDP/GDP	25.0%	24.0%	24.0%	25.0%	26.0%	25.0%	1%
Share budgeted PEAS/PE	5.1%	4.9%	3.0%	4.7%	4.6%	4.5%	3%
Share final PEAS/PE	4.2%	3.4%	2.8%	4.0%	.	3.6%	2%
Share final PEAS/AgGDP	2.3%	2.3%	2.4%	4.3%	.	2.8%	27%
Share final PEAS/GDP	0.6%	0.5%	0.6%	1.1%	.	0.7%	28%

Source: GDP figures from UBOS (2017).

Note: Budgeted amounts were assumed to be equal to actual (final) amounts for external financing over 2013/14–2015/16, as donor actuals were not available in the data for those years. As a result, the share of final PEAS within total PE might be overestimated. Blank cells with dots mean that data were not available. Averages excluded 2017/18 whenever data were missing for that year.

**Table 3.2. Main PEAS indicators (constant 2013 USh)**

	2013/14	2014/15	2015/16	2016/17	2017/18	Average	Average growth rate (%)
Budgeted PEAS	716	753	654	1,067	1105	859	15%
Final PEAS	408	404	429	844	.	521	34%
PEAS per capita	16,957	16,274	16,672	31,692	.	20,399	30%
PEAS per rural capita	13,733	13,269	13,703	26,285	.	16,748	31%
Budgeted PE	14,033	15,297	22,029	22,818	23,966	19,628	15%
Final PE	9,701	11,753	15,291	20,946	.	14,423	29%
Agricultural GDP	17,371	17,802	18,058	19,769	20,938	18,788	5%
GDP	69,276	74,233	76,168	79,403	80,688	75,954	4%

Source: Amounts in constant terms computed from Table 3.1 using the Consumer Price Index obtained from UBOS (2018).

**18 The low prioritization of agriculture in public budgets is not uncommon across the developing world.** Between 2013/14 and 2015/16, the average share of agricultural public expenditures in central government budgets stood at 2 percent for SSA (Table 3.3). Average shares were even lower in Northern Africa (1.7 percent), as well as in Latin America and the Caribbean (0.7 percent). In South East Asia, however, shares were slightly higher, averaging 3.7 percent. At 3.6 percent, the average share of PEAS in Uganda over 2013/14–2015/16 is low in comparison with other countries in the EAC. It is almost one-third of that of Burundi (9.7 percent) and about two-thirds of that of Rwanda (5.3 percent) and Kenya (5.7 percent). Hence, while few African countries meet the ambitious 10

percent target, by increasing the share of PEAS, for Uganda it is the quality of spending that matters the most. Thus, for MAAIF, the first step should be to improve the efficiency and effectiveness of spending of the current share of PEAS to strengthen the case for increased allocation.

**Table 3.3. Percentage share of final PEAS in national budgets across countries of the East African Community and developing regions**

	2013/ 14	2014/ 15	2015/ 16	Average
<b>Uganda</b>	4.2	3.4	2.8	3.5
Other EAC countries				
Kenya	5.2	6.5	5.5	5.7
Tanzania	3.6	4.1	4.0	3.9
Rwanda	3.7	5.5	6.7	5.3
Burundi	7.0	11.0	11.0	9.7
Other regions				
Northern Africa	1.9	1.59	1.47	1.7
Sub-Saharan Africa	2.08	2.28	1.72	2.0
Latin America and the Caribbean	0.75	0.7	0.78	0.7
South East Asia	2.83	4.02	4.11	3.7

Source: Shares for the other EAC countries obtained from FAO-MAFAP (2018), by computing the share of “agriculture-specific expenditures” in “total public expenditures.” Shares for other developing regions from FAO-GEA (2018).

### 3.3 Efficiency of Public Expenditure in Agriculture

**19** This analysis looks at the allocative efficiency (doing the right things) among the administrative units (including MAAIF and its SAGAs), local governments, and geographic distribution. Public spending on agriculture is efficient if it is directed toward generating knowledge (often in the form of technology), disseminating knowledge (technology), reducing transaction costs, and attracting private capital. Based on the functions performed by the various

administrative units, the analysis attempts to determine the most efficient and effective ways of allocating PEAS.

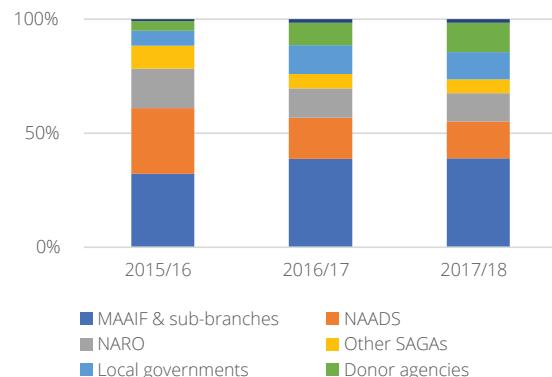
#### 3.3.1 Administrative Efficiency

##### Global and Regional Context

**20** Planned budget allocations favor a shift from advisory services to MAAIF and its SAGAs. The ASSP 2015/16–2017/18 budget provides indicative cost estimates for the strategies that contribute to the outcomes of the plan. These estimates serve as a basis for deriving reference budgetary allocations for the agriculture sector agencies. The ASSP budget designates the institutions responsible for all activities under all strategies. Based on the mapping described in Section 3.1, yearly estimates were computed for all agriculture sector institutions. The resulting detailed allocations are given in Table A3.1 in Annex 3 and summarized in Figure 3.1. Collectively, MAAIF, NAADS, and NARO capture the bulk of allocations in the sector (approximately 73.6 percent), but the composition has shifted sharply in favor of MAAIF (about 39 percent) at the expense of extension and advisory services. NAADS budget remained flat over the 2015/16–2017/18 and was projected to decline in 2018/19.

**Figure 3.1. Estimated budget allocations for agriculture sector agencies in the ASSP 2015/16–2019/20 (USh billions) (in the table, left) and relative proportions (in the figure, right)**

	2015/16	2016/17	2017/18
MAAIF and sub-branches	149	293	327
NAADS	133	136	136
NARO	80	97	103
Other SAGAs	47	49	51
Local governments	30	95	100
Donor agencies	19	75	109
Other	4	12	12
<b>Total</b>	<b>463</b>	<b>757</b>	<b>838</b>



*Note: Totals in the table are smaller than PEAS totals given in Table 3.1, given that the PEAS definition used in this review is larger than the one used in the ASSP.*

**21 It can be argued that the increase in allocation to MAAIF is consistent with the transfer of extension and advisory functions from NAADS to the ministry.** However, unless the additional resources are disbursed to the local governments as production grants, this move is contrary to the spirit of decentralization. Budget figures over 2016/17–2017/18 reveal that the increase in the local government budget was insignificant (about 5 percent). Given that it is the function of local governments to provide frontline agricultural services such as extension and advisory services, market information services, and rural infrastructure (rural and feeder roads, small scale irrigation, rural markets, and storage facilities), this trend needs to be reversed. "MAAIF should improve the quality of spending by disbursing the additional budget to the local governments to enhance service delivery", which is necessary for increasing agricultural productivity.

**22 Actual disbursements, overall, follow the same general trends.** Table 3.4 summarizes the share of each agency in the total disbursements of public funds in agriculture (Table A2.4 in Annex 2 provides

the nominal expenditure levels). NAADS was the biggest standalone expenditure item, averaging 30 percent of PEAS across 2013/14–2016/17, before MAAIF became the largest spending unit in 2017/18. The bulk of NAADS spending, though, went to finance the input subsidies under the OWC program. This way of spending public resources—namely, allocating public expenditure on private goods—is economically inefficient. The approach used to distribute subsidized inputs has been technically inefficient as well: it favored the wealthiest farmers, who can already afford the inputs. Nor did it strengthen private input suppliers, improve the targeting of subsidies (through the use of e-vouchers, for example), or invest in rural infrastructure to reduce transaction costs and ensure that farmers can obtain inputs easily.

**Table 3.4. Distribution of PEAS across various national ministries and agencies (% of total final expenditure)**

Agency	2013/14	2014/15	2015/16	2016/17	2017/18†	Average
MAAIF and sub-branches	17%	22%	16%	16%	25%	19%
NAADS	18%	38%	39%	33%	21%	30%
NARO	8%	9%	8%	10%	7%	8%
Other SAGAs	5%	7%	13%	12%	8%	9%
Rural development-related ministries	16%	13%	17%	22%	32%	20%
Local governments	37%	11%	4%	6%	7%	13%
Other	0%	0%	1%	1%	1%	1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: † Budgeted amounts (not final expenditure) are used for 2017/18. For other years, final expenditure is used. "Rural development-related ministries" include MoLG and the Ministry of Water and Environment. "Other" includes the National Forestry Authority and the Uganda Export Promotion Board.

**23** NARO was the second-biggest spender within the group of agricultural SAGAs. This finding is consistent with the analysis of impacts of different types of public spending in Africa described in Chapter 2, which finds that R&D generates the highest returns to investments in the sector. Large countries in Africa have earned higher returns to R&D (an internal rate of return of 43 percent) than small countries (an internal rate of return of 17 percent), but even in small countries, returns were still high enough (higher than a discount rate of 10 percent) to justify the investments. Research shows that recent spending by the CGIAR centers in Africa has generated US\$6 in benefits for every US\$1 spent on research. Returns to spending by national agricultural R&D agencies have been relatively lower but still significant, averaging about US\$3 in benefits for every US\$1 spent. In 2006, the NEPAD set an additional target to increase public spending on agricultural R&D to at least 1 percent of agricultural GDP, a target that few African countries have met. Over the last decade, spending on agricultural research constituted about 0.4 percent of agricultural GDP in SSA, compared with 1.3

percent in Latin America and the Caribbean, 0.6 percent in East Asia and the Pacific, and 0.9 percent in South Asia.

**24** Spending on agriculture by rural development-related ministries in Uganda, particularly by MoLG, increased significantly in 2016/17. The increase can be attributed to the launch of the Project for the Restoration of Livelihoods in the Northern Region and enhanced spending within the Community Agricultural Infrastructure Improvement Program (about USh40 billion each). These initiatives were part of the GoU's effort to provide targeted public services to areas that were previously affected by conflicts and that currently have high poverty rates and poor infrastructure, which is warranted. As seen in Chapter 2, spending on productive investments related to the development and diffusion of technological improvements, greater connectivity in rural areas, and irrigation development has done more to reduce poverty in Asia than input subsidies.

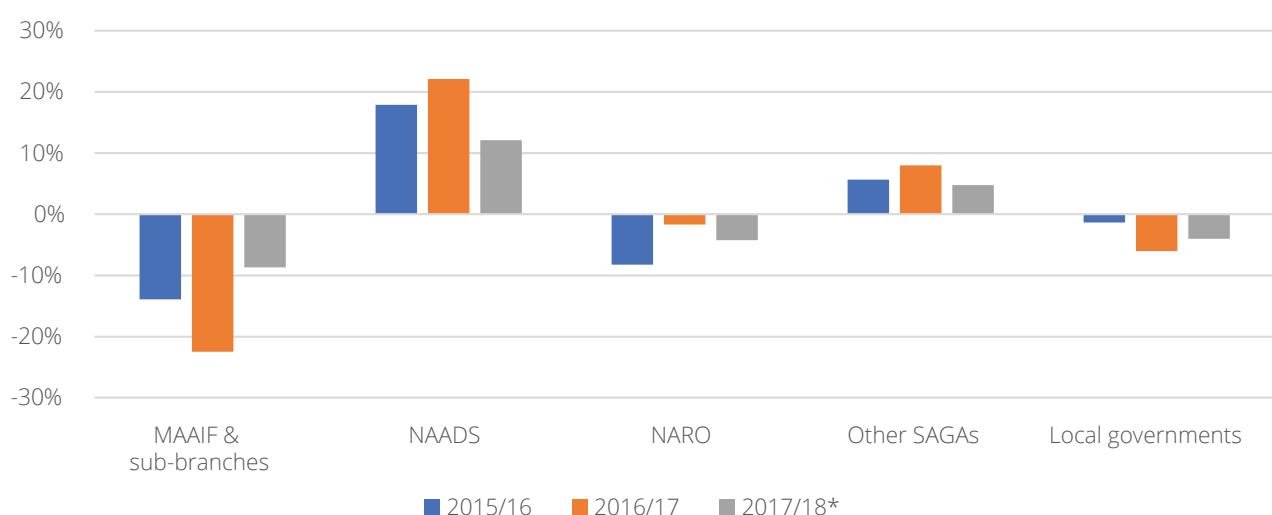
**25** At the agency level, however, some notable gaps appear between planned expenditure and actual disbursements. Figure 3.2 shows the gaps between target allocations and observed allocations for

selected agencies in the agriculture sector over 2015/16–2017/18. In those years, NAADS received significantly more than its planned budget, whereas MAAIF fell below its targets by relatively similar percentages. NARO has also been receiving lower allocations than expected. The other SAGAs were over-funded in relative terms, and so were the local governments. These gaps are examined in more detail in the next section. But the implications here are that either the ASSP targets were set arbitrarily too high for MAAIF and agencies, NARO, and local governments, or for some political reasons it was decided to increase the allocations for NAADS at the expense of the core functions of the ministry (policy and regulatory), NARO (R&D), and local governments (extension services). If not corrected, this could adversely impact the adoption of new technologies, which are necessary

for increased productivity and enhanced resilience in the agriculture sector.

**26 The tendency to prioritize NAADS is also observed in the Medium-Term Expenditure Frameworks (MTEFs).** In the 2015/16 MTEF, the share of MAAIF in the agriculture sector budget was projected to move from 28 to 35 percent between 2015/16 and 2017/18, while the share of NAADS was projected to move from 48 to 54 percent. In the most recent 2017/18 MTEF, the average MAAIF budget share for 2016/17-2017/18 is 33 percent, and the share of NAADS is 38 percent. While the MTEF foresees the MAAIF share declining to 25 percent in 2020/21, the share of NAADS is projected to move up and reach 51 percent in that year. These MTEF allocation targets are inconsistent with the ASSP targets.

**Figure 3.2. Gaps between observed (final) PEAS allocations and ASSP targets for selected agriculture sector agencies (deviations from relative shares)**



Note: Gaps for 2017/18 computed using budgeted expenditures from the PEAS database. Because the scope of expenditures under the ASSP and the scope of PEAS used in the present review do not overlap precisely, shares were compared looking only at the restricted set of agencies displayed in the figure.

**27** The increase in NAADS budget, which is mainly used to finance input subsidies, means that more public resources are spent on private goods. In addition, the increase in NAADS budget for input subsidies will distort the factors market and crowd out the private sector. While some attempts were made to rebalance budgets in favor of MAAIF around 2015/16 (the year in which the ASSP was introduced), the most recent budget projections from MoFPED indicate that NAADS is expected to increase its dominance as a budgetary recipient in the coming years. Plans outlined in the ASSP for the administrative organization of the sector appear to have only a limited influence on the annual budgetary process and decisions for the sector.

access to improved technologies, and induce proactive participation in value chain development." The ASSP describes the responsibilities of local governments more generically, saying they are to "collaborate with MAAIF on matters of increasing production and commercialization of agriculture" (MAAIF 2016:68).

## Decentralization

**28** The GoU is committed to decentralization. The country's second NDP 2015/16–2019/20 includes a chapter on subnational development, with proposals to strengthen local governments by expanding their capacities for service delivery and by scaling up their revenue base. These objectives are regularly referenced in budgetary documents for the agriculture sector. For example, the Sector Budget Framework Paper 2014/15 says that the "Government will continue to provide agricultural services through the decentralized system of government and will work to strengthen it."

**29** The Agriculture Sector DSIP 2010/11–2014/15 outlines several core functions of local governments for public service delivery in agriculture: "deliver regulatory and quality assurance services, collect agricultural statistics and information, deliver advisory services to increase farmer

**30** In the PEAS database compiled for this review, district-level spending on agriculture relates to three major subfunctions. Extension services is by far the largest subfunction, followed by input subsidies and, to a smaller extent, feeder roads. Local governments in Uganda thus have a key role to play in providing basic goods and services to smallholder farmers to increase agricultural productivity.

**31** The decentralization objectives are not fully matched with corresponding allocation of resources. Using the ASSP budget plan as a reference (Figure 3.1), decentralized spending on agriculture was supposed to increase to 12 percent in 2017/18. After that, it was supposed to stay at around 10 percent through 2019/20. During the period under this review, however, less than 10 percent of the sector spending went to local governments. Over 2015/16–2017/18, the share of PEAS going to local governments increased but remained below 12 percent. The low share<sup>10</sup> needs to be seen from the perspective of the general underfunding of the sector, implying that local governments have in effect been left with very limited resources to deliver on their assigned mandates. The underfunding of local governments echoes concerns from MoFPED about budget absorption capacity and the quality of service delivery in decentralized spending units (BMAU 2014). These circumstances may trigger a vicious

<sup>10</sup> Note however that some of the PEAS at the decentralized level may not have been included in this analysis, given that the project output descriptions did not allow them to be identified properly.

cycle in which decentralization is further constrained because MAAIF and MoLG become reluctant to transfer money to the districts. Country-wide agencies like NAADS are preferred owing to their better track record in public services delivery.

## Geographic Distribution

**32** **The ASSP does not provide very precise spatial targets for agricultural spending in Uganda.** It merely states that the list of priority commodities has been defined based on national agroecological zones (MAAIF 2016: 69). The NDP 2015/16–2019/20 says that the Northern and Eastern Regions should receive specific policy attention because of their higher poverty rates and potential for instability. Focus areas include productivity improvements in agriculture, fishing, and agroprocessing.

**33** **According to the Ugandan poverty assessment report (2016), regional variations in poverty are large and increasing, with most of the poor concentrated in the north and east.** In 2006, approximately 68 percent of the poor lived in the Northern and Eastern Regions.<sup>11</sup> By 2013, this proportion had increased to 84 percent. About 47 percent of the poor live in the Northern Region and another 37 percent live in the Eastern Region. In the North East subregion, almost three in four residents (74 percent) live below the national poverty line. This subregion is also the least populous. Poverty is also high in the Mid-Northern subregion, where 35 percent of the population lives in poverty. The report concludes that a focus on the Northern and Eastern Regions will be needed for Uganda to end extreme poverty and boost shared prosperity, as well as to reduce the social

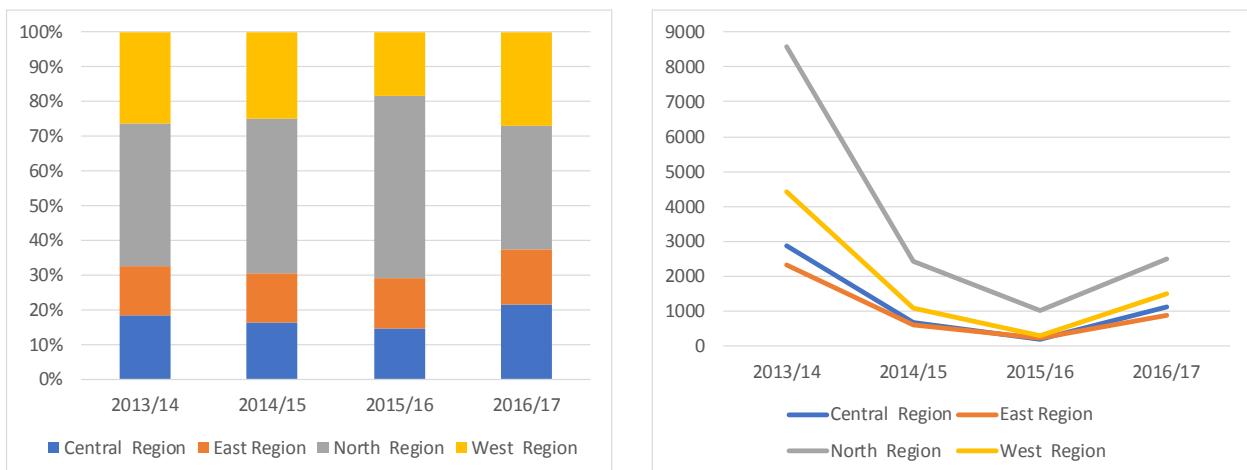
and political tensions that can emerge from stark differences in economic development across regions.

**34** **The spatial disaggregation of PEAS shows that indeed spending for a good cause favors the Northern Region.** The BOOST public expenditure database<sup>12</sup> and the IFMS datasets of MoFPED make it possible to disaggregate PEAS down to the regional level, up to 2016/17. The share of PEAS allocated to the regions closely matches the share of PEAS allocated to districts and municipal councils (the average shares are displayed in Table A2.4, Annex 2). Decentralized PEAS chiefly targets the Northern Region, followed by the Western Region and the Central and Eastern Regions. Per capita PEAS is also persistently higher in the Northern Region (Figure 3.3). According to the poverty assessment report (2016), households in Uganda's Northern, Eastern, and Western Regions have much lower levels of human capital, fewer assets, and more limited access to infrastructure than those in the Central Region. The Northern Region is the worst off, largely because conflict took lives, damaged communities, destroyed assets, and had lasting effects on the aspirations of many individuals. In addition, households in the north are relatively large and more likely to be headed by a woman who has not had any formal education. The Eastern Region also lags the Central and Western Region in nearly all of these metrics.

11 Uganda poverty assessment report (2016).

12 See <http://boost.worldbank.org/country/uganda>.

**Figure 3.3. Disaggregation of decentralized PEAS (final) by region (left); per capita PEAS (final) by region (USh) (right)**



Source: Per capita amounts given in the right-hand figure were obtained using population figures from UBOS (2016). Note. No regional disaggregation of budgeted PEAS is available for 2017/18.

**35** This pattern does not follow from differences in population levels. In fact, population in the Eastern and Central Regions is higher than in the Northern and Western Regions. The budgetary focus on the Northern Region is in line with the objectives of the NDP, but the low share of the Eastern Region is probably not. The difference can be explained by the large donor-funded projects that are targeting the conflict and poverty-stricken northeastern areas, unlike the Eastern Region, which depends largely on domestic resources. PEAS targeting the Northern Region tends to flow to areas where agricultural potential is high, which are not always the areas where poverty is concentrated (see Box 3.1.). This resource flow is probably consistent with the general hypothesis that the elasticity of agricultural production with respect to spending in the sector will be higher in areas with high agricultural potential because of favorable natural endowments and if the overall policy environment is conducive to a positive supply response. Geographic PEAS allocations thus seem to rightly be guided by the country's need to correct broad socioeconomic

imbalances (reducing inequality and poverty), as well as by opportunities for rapid agricultural productivity growth. In a way, and if well managed, such targeted spending can help address historic inequalities in the distribution of public goods and services in Uganda for poverty reduction and shared prosperity.

### Box 3.1. Geographic disaggregation of PEAS

Uganda's Northern Region is poorer and less populous than other regions of the country. The region extends across almost 35 percent of the national land area, and although it has only 21 percent of the country's population, it has around 44 percent of the country's poor.<sup>t</sup> Even if some degree of stability has been observed in recent years, the Northern Region has been through decades of violent conflict and remains a fragile area. Value-added per acre tends to be lower in the Northern Region than in other regions, both for rich and poor farmers.<sup>f</sup> The region has significant agricultural potential,<sup>s</sup> but there are significant constraints, such as poor enforcement of land tenure regulations.<sup>tt</sup> Economic performance varies within the Northern Region. The Karamoja, Sebei, and Bugisu subregions (in the northeastern part of the region) are generally poorer than subregions in the northwestern part (Acholi, Lango, and Teso).<sup>ff</sup> Karamoja is an arid agroecological area, and Sebei and Bugisu are much smaller. The table offers insights on PEAS allocations at the subregional level.

Final PEAS among the subregions of Northern Region, Uganda				
Subregions of Northern Region	2013/14	2014/15	2015/16	2016/17
Teso, Lango, and Acholi	46%	48%	55%	51%
Karamoja, Sebei, and Bugisu	18%	18%	16%	17%
Other subregions	36%	34%	29%	31%

A mapping of GDP per capita across districts by the United States Agency for International Development (USAID) confirms the Northern Region's richer districts are in the Teso, Lango, and Acholi subregions.<sup>ss</sup> As the table indicates, PEAS chiefly targets those subregions, which are also more suitable for farming, especially in comparison with the arid northeastern subregions. Both agricultural potential and growth potential seem to be major drivers of decentralized PEAS in the Northern Region, along with poverty mitigation and efforts to channel public resources to the fragile zones of the country.

Source: <sup>t</sup> UBOS (2017). <sup>f</sup> World Bank (2010b: 8). <sup>s</sup> Löwe and Phiona (2017). <sup>tt</sup> World Bank (2010b: 23).  
<sup>ff</sup> World Bank (2016a: 18). <sup>ss</sup> USAID (2017: 10).

### 3.3.2 Technical Efficiency

**36** Technical efficiency (doing things well) in public spending involves making the best use of inputs to provide outputs in the form of public services. Most of the donor-funded projects are being implemented inefficiently for various reasons. But not all of the blame for technical inefficiency rests with MAAIF. Constraints such as delayed budget ratification by Parliament, and untimely and insufficient release of counterpart funds by MoFPED, are beyond MAAIF. They were identified during AgPER 2010, but to date are still unresolved. These constraints cause several years to pass before a donor-funded project can be launched in Uganda. Other constraints, including weak procurement and financial

management capacity, improper appraisal and feasibility work, poor coordination of project preparation and implementation between MAAIF and local governments, and inadequate operating budgets for technical staff are within the purview of the ministry itself. These constraints result in high cost overruns, low-quality work, and other kinds of wastage. Although budget execution rates are high for domestic resource spending on agriculture<sup>13</sup> (approximately 90 percent for the years under review), the execution rates for external resources (donor-funded projects) are low. Given that capital expenditures account for a large share of the development projects, MAAIF must work with MoFPED to address these constraints, prior to making a convincing case for scaling up funding for agriculture.

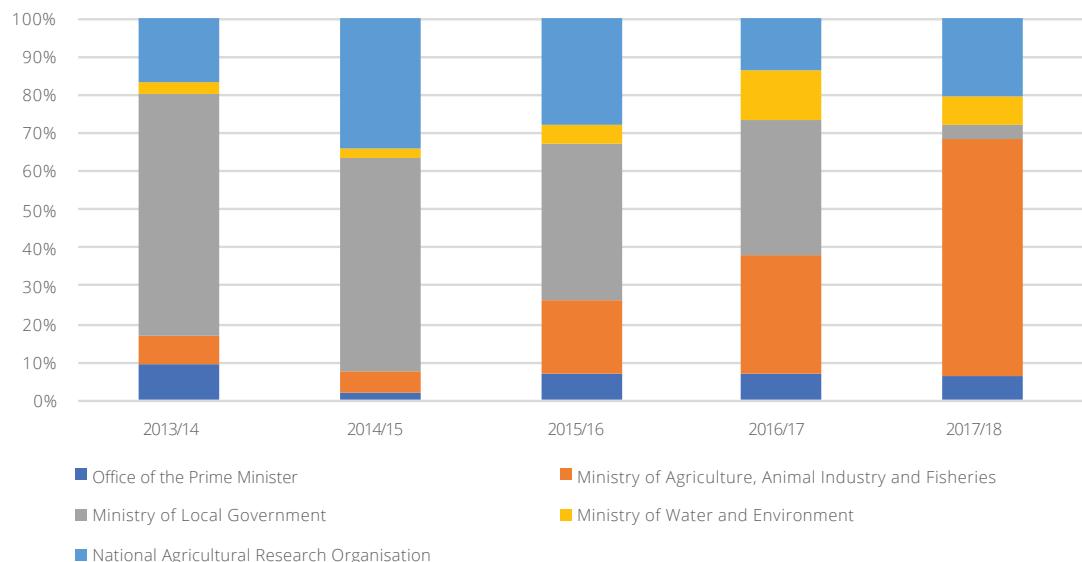
<sup>13</sup> Execution rates for donor spending could not be computed as actual (final) amounts, for donor sources are not available in the latest version of the database.

**37** A sizable proportion of resources budgeted for the agriculture sector in Uganda comes from donor-funded projects. From 2013/14 through 2017/18, budgeted amounts recorded under MAAIF spanned 25 projects on average. "During this period, as much as 33 percent of agriculture sector budgets flowed from external sources through donor-funded projects". Such a high share may weigh negatively on the stability of PEAS and create institutional distortions, such as wage gaps and the related movement of skilled personnel from regular positions in the civil service to "project" positions. An additional consequence of the high donor presence in agriculture is "projectization," which is the tendency of projects with a lifespan of three to five years to become the usual way of intervening in the sector. The lack of a programmatic approach for using external sources of funds limits the impact of individual projects and increases transaction costs. Consistent with the Paris Declarations on increasing development effectiveness, MAAIF should move away from a project mode to a programmatic approach, implemented through a better donor coordination framework.

**38** In recent years, MAAIF has assumed a much weightier role in managing donor funds. Figure 3.4 shows how budgeted external financing has evolved across votes (ministries and agencies). Donors tended to allocate a minor share of their resources to MAAIF in 2013/14 and 2014/15. In those years, on-budget support to agriculture and rural development was mostly channeled through MoLG and NARO. At that time, donors were mainly supporting extension services through NAADS programs and R&D activities under NARO. From 2015/16 onward, however, shares of external financing going to MAAIF rose, as donors cut back their support to NAADS. This reduction occurred as NAADS shifted its focus from extension services to input distribution

under OWC, reaching about 31 percent of the PEAS in 2016/17. In 2017/18, the share of externally funded PEAS going to MoLG declined sharply, while the share of MAAIF continued to increase, probably because the extension services function was transferred from NAADS to MAAIF. Given this increase, MAAIF needs to improve technical efficiency, by aligning the donor funding with the ASSP target. In other words, it must ensure that external resources are financing national priorities that are necessary for achieving the ASSP objectives. MAAIF also needs to develop an effective framework for capturing the off-budget spending by donors; then MAAIF could track the off-budget spending in the sector and assess its impacts.

**Figure 3.4. Distribution of budgeted external financing in support of the agriculture sector across votes**



**39** Increased spending from external sources not only leads to the increase in PEAS, but also creates a fiscal space for increasing the allocation of domestic resources across agencies. Figure 3.5 depicts the allocation of domestic funds by agency. As mentioned, noteworthy changes include an increase in the shares of NAADS and MoLG in total agricultural spending in recent years, particularly the 2016/17 spike (70 percent). In line with this trend, donor contributions to the budget rose by around 150 percent. The money was chiefly channeled to MoLG and MAAIF. Interestingly, contributions of domestic resources to the MAAIF budget remained stable throughout 2015/16–2016/17, implying that the nearly twofold increase in the MAAIF budget (see Table A2.4 in Annex 2) came from the increase in external resources. Meanwhile, donors stayed out of NAADS, and contributions of domestic resources to the NAADS budget increased by 78 percent. As noted, the increase in the NAADS budget presumably served to fund the activities of OWC. However, we learned from Chapter 2 that even “smart” input subsidies have

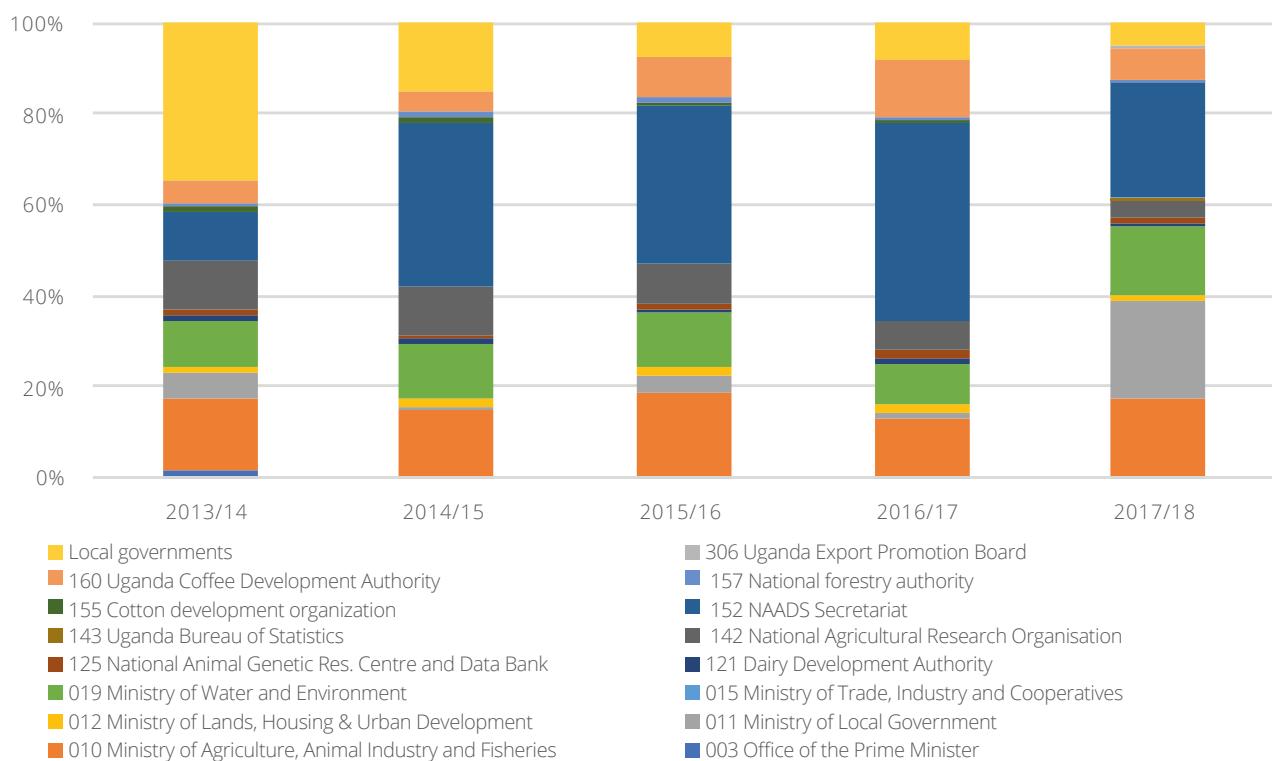
seldom produced benefits commensurate with their fiscal costs, although they remain politically attractive. Therefore, where subsidies continue to be used, they should at least be reduced to a modest amount in national agriculture budgets, with a clear exit strategy. In the longer term, no program will sustainably raise fertilizer use until it becomes profitable for farmers to buy fertilizer on commercial markets after they graduate from the subsidy program.

**40** Technical inefficiencies, however, have emerged from how subsidized inputs are being delivered to farmers. Considerable volumes of inputs are distributed under OWC, ranging from seed (maize, beans, soybeans, rice, sorghum, groundnuts, and Irish potatoes) to banana plantlets, heifers, layers and broilers, and tilapia and catfish fingerlings. While these inputs are not costed in the National Budget Framework Paper (NBFP) they average US\$100 million equivalent per year (World Bank 2015: 19). The Parliamentary Committee on Agriculture (2017) report found that the unit costs of some of the inputs procured were

20–50 percent higher than comparable market prices. The report also found that free inputs procured under OWC were often of poor quality; they were distributed late, without communication or consultation with districts; without extension services (and rarely with complementary inputs such as fertilizers, pesticides, and irrigation); and

with no monitoring of results. This approach resulted in the wastage of inputs. The report further states that “giving free inputs to farmers is not sustainable and will in the long run breed dependency syndrome.” It duly recommends that GoU should address these inherent technical inefficiencies.

**Figure 3.5. Distribution of budgeted, national (non-donor) PEAS across votes**



**41** The share of external financing in agriculture budgets varies across national institutions. PEAS implemented by the Office of the Prime Minister (OPM) are almost entirely dependent on donor funds (Table 3.5). These donor funds have been used to finance special programs focusing on agricultural and rural development in the Northeastern Region. As noted, this region is emerging from conflicts, has poor infrastructure, and has higher poverty rates than any other region in Uganda. Donor funds therefore provide an important complement

to domestic sources of funding. The donor-funded part of MoLG concentrates on a handful of projects, also with an emphasis on the poorer regions of the country. The drop in 2017/18 reflects the fact that those projects were almost fully taken over by the government, also calling for a compensatory increase in the domestic fund allocation. In MAAIF, donor funds are spread across a larger number of initiatives. About seven projects received donor support annually from 2013/14 to 2017/18. The strong donor presence in MAAIF allows national funds

to focus on NAADS and, to a lesser extent, MoLG (decentralized government).

**42** Despite complementarities, the high shares of donor spending in PEAS remain a challenge for technical efficiency. This is because this spending is difficult to trace accurately. For instance, no information was available in the BOOST database on expenditure amounts for external funding in 2013/14–2015/16. Donor budgets are often easier to track than donor final expenditures, which might explain why such gaps are observed. The budgets of donor-funded projects are usually agreed upon with national institutions, and some data sharing inevitably occurs at that stage. As projects are implemented, however, reporting of donor expenditures is poor. The problem is a recurring one: more than a decade ago, a study by the World Bank and the Department for International Development (DFID) already pointed to the need to design incentive systems for effective reporting on project finance by donors (Williamson 2008: 27).

### 3.3.3 Economic Efficiency

**43** Analysis of the allocative efficiency of public expenditure provides an understanding of priorities and the balance of spending. It essentially consists of an economic and functional decomposition of public spending. An economic decomposition of public spending on agriculture in Uganda shows that development expenditures dominate both budgeted and final PEAS in Uganda (Table 3.6). They represented about 66 percent of budgeted PEAS for the years under review. There were no major differences between budgeted and final PEAS in terms of the relative sizes of recurrent and development spending, which is surprising because development expenditure usually exhibits lower execution rates in comparison with recurrent expenditure (salaries must be executed each year to keep the administration running, while capital expenditures can be delayed across the lifespan of development projects).

**Table 3.5. Share of external financing in budgeted PEAS across votes**

Vote	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18
003 Office of the Prime Minister	81%	100%	91%	96%	92%
010 Ministry of Agriculture, Animal Industry, and Fisheries	24%	22%	29%	62%	43%
011 Ministry of Local Government	88%	99%	79%	95%	3%
019 Ministry of Water and Environment	17%	14%	14%	50%	9%
142 National Agricultural Research Organization	49%	70%	55%	59%	51%

**Table 3.6. Shares of recurrent and development spending within budgeted and final PEAS**

		2013/14	2014/15	2015/16	2016/17	2017/18	Average
Budgeted PEAS	Recurrent	36%	35%	37%	36%	22%	33%
	<i>Of which wage</i>	9%	14%	11%	12%	7%	10%
	<i>Of which non-wage</i>	26%	21%	27%	24%	15%	23%
	Development	64%	65%	63%	64%	74%	66%
	Unspecified	0	0	0	0	3%	1%
Final PEAS	Recurrent	31%	32%	35%	35%	NA	33%
	<i>Of which wage</i>	8%	14%	8%	12%	NA	11%
	<i>Of which non-wage</i>	23%	18%	27%	23%	NA	23%
	Development	69%	68%	65%	65%	NA	67%

Note: Final PE and PEAS do not include external financing (donor spending). No disaggregation between recurrent and development spending is available for donor funds.

**44** The share of development expenditures in PEAS was much larger in comparison with the national PE (Table 3.7). While PE indicators are probably driven up by spending on defense, education, or health (sectors where wage shares in budgets tend to be high), this nevertheless suggests that agricultural budget holders are adopting long-term spending strategies. Relative proportions of wage and non-wage expenditures within recurrent expenditures do not differ much between total PE and PEAS, both for budgeted and final amounts. The absence of any notable difference between execution rates for recurrent spending and execution rates for development spending also applies to overall PE.

**Table 3.7. Budgeted and final PE and PEAS, recurrent (wage and non-wage) and development, 2013/14–2017/18 average (%)**

	Budgeted PE	Budgeted PEAS	Final PE	Final PEAS
Recurrent	71%	34%	73%	25%
<i>Of which wage</i>	19%	12%	18%	8%
<i>Of which non-wage</i>	52%	22%	55%	17%
Development	29%	66%	27%	50%

Note: Final PE and PEAS do not include external financing (donor spending). No disaggregation between recurrent and development spending is available for donor funds. Spending of the "unspecified" type (a minor proportion of 2017/18 budgets) was omitted from the table.

**45** "In Uganda, 'development expenditure' is not synonymous with 'capital expenditure'." The high share of development expenditures in PEAS is to some extent due to misclassification. First, many items reported as development expenditures serve to fund recurrent activities. For example, "support to institutional development" is reported as a project in the IFMS under development expenditures annually year through 2013/14–2017/18. Oxford Policy Management (2007: 20) had already recommended tagging this item as recurrent spending. Second, a high share of development expenditures is used to purchase goods and services that are redistributed to farmers. For example, during the reviewed period, 96 percent of the NAADS budget was classified as development spending, even though much of this budget serves to buy seed and fertilizer. Thus, development expenditures within PEAS should not be viewed as "capital expenditures."<sup>14</sup> Only a small proportion

14 This issue was already identified in World Bank (2010a: 68).

of development expenditures goes into investments with long-term effects such as infrastructure (see the next section).<sup>15</sup>

**46** The above information suggests that the economic efficiency of PEAS in Uganda is rather low. But better budget monitoring systems are needed for a full assessment. Too little is invested in rural access roads, small-scale irrigation, bridges, and wholesale and livestock markets. In addition, only a minor share of the budget is allocated to veterinary, sanitary, and phytosanitary laboratories and equipment, despite their importance for raising agricultural productivity. These expenditures generate higher returns to investment. In Uganda, less than 1 percent of smallholder farmers use irrigation. Across Africa, irrigated area as a share of total cultivated area is estimated at 6 percent, compared with 37 percent for Asia and 14 percent for Latin America. Recent studies show that irrigated land in Africa can be expanded from 13 million hectares to 24 million hectares in economically viable ways, with returns ranging from 17 percent for large-scale irrigation to 43 percent for small-scale irrigation. Investing in rural roads is important for reducing transport costs and increasing access to markets by smallholder farmers. Trader surveys in Benin, Madagascar, and Malawi find that transport costs account for 50–60 percent of total marketing costs. A reduction in transport costs reduces both trade costs and interregional price gaps. The spillover effects are that farmers pay less for their inputs and get more for their outputs, hence increasing incomes. Not surprisingly, access to markets facilitates economic diversification in rural areas and creates incentives for smallholder farmers to adopt modern production technologies. Technical inefficiencies in capital expenditures further

reduce the impacts of even small capital outlays to a very low level. MAAIF therefore should ensure that a larger part of the development budget allocation is actually spent on capital expenditures.

### 3.3.2 Functional Efficiency

**47** The assessment of functional efficiency looks at the composition of public expenditures by main functions and at how it aligns with national policies, strategies, sector objectives, and other priorities. In 2016, the government formally endorsed a commodity-based approach (CBA) in its agricultural policy (MoFPED 2016a: 75), although the idea of focusing on a set of priority commodities had already been advanced in the DSIP (MAAIF 2010a: 59). The CBA identifies 12 priority commodities. It is assumed that PEAS will chiefly serve to build up the value chains for these commodities. The ASSP provides estimated budget allocations for commodity-specific spending and maps activities to around 20 different crops and livestock commodities.

**Table 3.8. Target shares for commodity groups in the ASSP budget**

Commodity groups	2015/16	2016/17	2017/18
All	159	405	486
Cash crops	119	139	138
Crops, general	94	101	109
Fisheries	10	13	13
Livestock and dairy	97	124	130
<b>Total</b>	<b>480</b>	<b>782</b>	<b>876</b>
Share of identified groups in total (excludes "all")	67%	48%	45%

Source: Authors, using Annex D of the ASSP (MAAIF 2016).

Note: Cash crops include not only coffee and tea but other commodities such as cocoa, oil palm, and oilseeds.

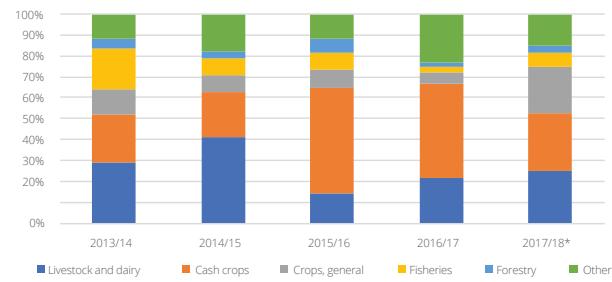
15 Of course, recurrent or “non-capital development” expenditures such as the salaries of doctors, researchers, or teachers can also have beneficial long-term effects. The point here is that not all development expenditures in agriculture in Uganda should be considered as capital expenditures.

**48 Cash crops, crops general, fisheries, and livestock and dairy account for nearly 45 percent of the budget allocated for agriculture in Uganda (Table 3.8).**<sup>16</sup> The remainder of the agriculture sector budget serves to fund goods and services that benefit all commodity value chains without making any distinction among them. The share of commodity-specific spending has declined in recent years, falling from 67 percent in 2015/16. This implies functional inefficiencies, because the declining spending on these priority and strategic commodities leads to a slowdown in agricultural productivity and value addition. Depending on the supply response, this could weaken the backward and forward linkages in the sector and have adverse effects on overall growth in value added and poverty reduction efforts. Its distribution across broad commodity groups has balanced out, however, with a more notable increase in the budget for livestock and dairy. This increase could benefit the poor communities in Northeastern Region, where animal husbandry is the predominant economic activity.

**49 It is more difficult to map actual spending to specific commodities; on average, only 21 percent of PEAS could be assigned to identified subsectors.** The remainder benefits the agriculture or rural sector as whole, including most recurrent costs as well as spending on infrastructure or multipurpose projects. Within PEAS specific to subsectors, the emphasis on cash crops increased between 2013/14 and 2015/16, reaching as much as 50 percent (Figure 3.6). The shift occurred simultaneously with the introduction of the CBA. Livestock, dairy, and forestry also received significant proportions of the budget, whereas other crops and fisheries received less funding.

The relative importance of the “crops, general” subgroup increased in 2017/18 because of increased allocations under the Commercialization of Agriculture in Northern Uganda Project. The rise in the “other” subgroup in 2016/17 resulted from increased spending on a Vegetable Oil Development Project. The “crops, general” and “other” categories represent the main staples and grains, which are important for food security, especially for the poorer households. Increased public spending on these smallholder crops will help to increase their productivity and incomes and have a greater impact on poverty reduction.

**Figure 3.6. PEAS final expenditure, disaggregated by identified subsector**



*Note: \*Budgeted expenditures were used for 2017/18, not actuals. “Livestock” includes cattle, dairy, poultry, pigs, and goats. “Crops, general” includes crops that could not be associated with cash or food crops. “Other” includes horticulture, vegetable oils, insects, and honey.*

**50 In practice, commodity-specific spending is concentrated on a few commodities only.** By disaggregating commodity subsectors into single commodities (see Table A3.2 in Annex 2), it is evident that coffee, the main export commodity and number one foreign exchange earner, dominates the cash crop subsector. Budget allocations to the Uganda Coffee Development Authority (UCDA) almost quadrupled between 2014/15 and 2015/16, probably because coffee is a high-value cash crop predominantly produced by smallholders. The shares of tea, which

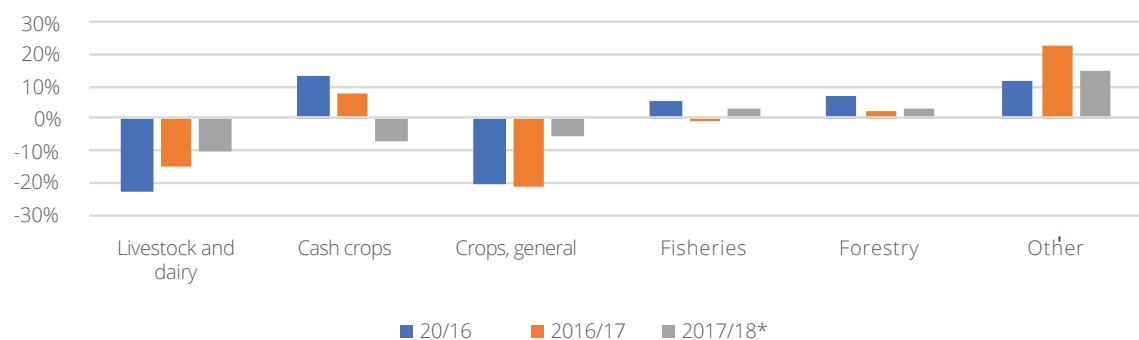
16 These are the 12 priority commodities under the ASSP, namely: bananas, beans, maize, rice, cassava, tea, coffee, fruits and vegetables, dairy, fish, livestock (meat); and four strategic commodities, namely, cocoa, cotton, oil seeds, and oil palm.

is mainly a large-scale plantation crop, and other cash crops, including cotton, have remained close to zero over the period. Within the “livestock and dairy” subsector, spending has focused more on beef and less on dairy products. Beef comes mainly from the northeastern areas, where pastoral production systems dominate, and poverty is high.

**51** **The relative shares of actual spending differ from those planned in the ASSP budget.** Traditionally, budget spending favored cash crops as well as items in the “other” category, which include horticultural crops and various innovative items such as honey (Figure 3.7). Funding gaps have affected “livestock and dairy” as well as “crops, general,” which includes commodities such

as beans, cassava, bananas, and rice. As mentioned, these crops are very important for food and nutrition security, especially for poorer households. Continued neglect would mean slowing down the poverty reduction effort and increasing food and nutrition insecurity in Uganda. The ASSP budget plan seldom refers to spending on forestry and fisheries, which explains why small deviations are observed for these groups. The CBA is reflected in the budget data only to a limited extent, and allocations of resources across commodity groups have varied from what is outlined in the ASSP. This mismatch illustrates either that ASSP budget estimates were arbitrary and overly ambitious or that the budgeting process does not adhere to the targets set in the ASSP.

**Figure 3.7. Gaps between observed (final) PEAS allocations and ASSP targets for commodity target groups (deviations from relative shares)**



*Note: Gaps for 2017/18 were computed using budgeted expenditures from the PEAS database.*

**52** **Extension and research jointly, along with producer subsidies, take up nearly half of the sector budget.** Table 3.9 maps the ASSP budget plan to subfunctions. Producer-subsidies are the largest category, comprising roughly one-quarter of the total, and include fertilizer and seed subsidies as well as on-farm support and mechanization. The allocation to inspection services, which are critical for promoting regional

and international trade, is low. Planned ASSP allocations remained stable over the whole 2015/16–2017/18 period. There is an apparent willingness to gradually phase out producer subsidies to the benefit of “processing, marketing, and storage” as well as other subfunctions such as irrigation, but the planned shift is expected to be incremental across several years. The main question is where the savings from reduced

spending on producer subsidies will be spent. Based on the findings discussed in this review, it would be beneficial if the savings were transferred to the capital expenditures that generate the highest returns on investment, such as R&D and small-scale irrigation systems (core functions of MAAIF) and extension and advisory services (core functions of local governments).

**53** **Data on actual spending allow for even further disaggregation of PEAS (Table 3.10) and are generally consistent with planned amounts.** In accordance with the ASSP targets, “input subsidies” have been the dominant category on average, followed by extension and advisory services provided through NAADS. “Processing and marketing” as well as “research” were other dominant subfunctions. Shares going to irrigation were lower, even though they increased in recent years. Allocations for feeder roads were rather small, averaging around

3 percent for the period. Investments in irrigation, rural or feeder roads, livestock and plant pest and disease control, regulatory services, and institutional development are all core public goods—goods in which the private sector will not invest. But they are essential for catalyzing private investment in agricultural production and agribusiness. This lack of investment in these areas limits smallholders’ access to markets and reduces their income. Increasing public expenditure on R&D, extension services, and irrigation is consistent with allocative efficiency—spending public resources to provide public goods and services. By contrast, increasing public expenditure on producer subsidies amounts to allocative inefficiency—spending public resources on private goods. Spending public resources on processing and marketing, which are primarily private goods, is encouraged if used to leverage private sector investments.

**Table 3.9. ASSP budget targets mapped to major agricultural subfunctions**

Subfunction	2015/16	2016/17	2017/18
Agricultural research	86.7	103.8	109.4
Extension	55.1	146.4	177.2
Producer subsidies	187.3	220.3	231.7
Inspection	51.2	75.1	74.2
Irrigation	6.1	40.3	68.4
Other	9.7	35.9	39.4
Processing, marketing, and storage	61.5	121.3	122.6
Training	22.3	39.3	52.9
<b>Total</b>	<b>480.0</b>	<b>782.4</b>	<b>875.7</b>

*Source: Authors, using Annex D of the ASSP (MAAIF 2016).*

**Table 3.10. Final PEAS, disaggregated by agricultural subfunction (USh billion)**

	2013/14	2014/15	2015/16	2016/17	2017/18†
Input subsidies	79	122	153	258	328
Capital subsidies	5	5	5	13	15
Other subsidies	4	7	3	1	6
Research	46	50	60	159	153
Extension and advisory services	150	92	57	120	128
Training	17	39	16	29	33
Inspection and quality control	1	2	3	4	4
Feeder roads	2	0	9	59	58
Irrigation	28	32	39	53	159
Other infrastructure	4	0	5	3	12
Storage	0	0	0	0	2
Processing and marketing	35	30	68	150	282
Administrative costs	35	36	44	67	73
Other	0	0	2	48	79
<b>Total</b>	<b>406</b>	<b>416</b>	<b>463</b>	<b>965</b>	<b>1,332</b>

Note: † Budgeted expenditures were used for 2017/18, not actuals. There are very minor differences between total subfunctional PEAS and total PEAS as reported in Table 3.1. The gap is due to apportionment of categories for multifunctional projects with components falling outside the perimeter.

**54 Some of the changes in the relative spending shares mark improvements in the policy direction, whereas others are contextual.** Processing, marketing, and irrigation gained some ground in the last couple of years, especially relative to input subsidies and extension. Increased investments in processing and marketing from 2015/16 on followed in great part from the government's recognition that grain storage capacity was lacking across the country (MoFPED 2016a:76). As mentioned, this kind of spending is encouraged if it leverages private investments. Research also came to absorb a larger proportion of expenditures, especially in 2016/17. This jump in research spending is attributable to a large inflow of World Bank funds in the context of the Agricultural Technologies and Agribusiness Advisory Services Project. The ending of this project in June 2018 (World Bank 2018b) places the sustainability of research funding at risk, given that the project represented about 40 percent

of agricultural research budgets during 2016/17–2017/18. In 2015/16, input subsidies saw a big boost to the detriment of extension services. After that, resources allocated to extension services recovered somewhat. This development needs to be analyzed in the context of OWC (Box 3.2), which, from 2015 on, changed how input subsidies and extension services were provided and funded. Initially, the goal was to procure inputs through NAADS; eventually, extension services were shifted to MAAIF.

**55 Deviations in spending from planned targets varied by subfunction (Figure 3.8).** Producer subsidies (which include input subsidies) and extension, the two largest subfunctions, deviated the least. A larger share than foreseen went to agricultural research, and the behavior of budget holders reflected the ASSP objective of increasing investments in processing, marketing, and storage. The relative funding gap observed for inspection is consistent with the gap

mentioned earlier for the “livestock and dairy” commodity group.

**56** At the aggregate level, however, the budget composition is not well aligned with the country’s broader development strategy, which relies heavily on the expansion of the private sector. The ASSP states that incentives will be needed to promote private sector engagement in agriculture (MAAIF 2016), even though the plan provides no specifics on those incentives. Figure 3.9 shows that spending on private goods such as input provision and processing, marketing, and storage dominates agricultural budgets and is growing. It represented 21 percent of budgeted PEAS on average during 2013/14–2015/16 and increased to 42 percent in 2016/17–2017/18. Such heavy investment in private goods risks crowding out private investors in the sector. It also reduces the overall effectiveness of public spending by diverting resources from investments with higher returns, such as agricultural R&D, rural infrastructure, or capacity building for farmers.

**57** Research from Latin America and the Caribbean finds that a reallocation of 10 percentage points of public expenditures from subsidies to public goods increases per capita agricultural income by about 2.3 percent without increasing total spending (Chapter 2). These findings from cross-country analysis for Latin America are consistent with the analysis for Asia, where spending on rural infrastructure, agricultural research, and dissemination had large poverty alleviation effects. For example, studies in four Asian countries—Bangladesh, India, Indonesia, and Pakistan—conclude that fertilizer subsidies were not significant in farmers’ adoption of technology. They instead identify R&D of new technologies, irrigation expansion, and other investments, such as roads, as the main drivers—indicating

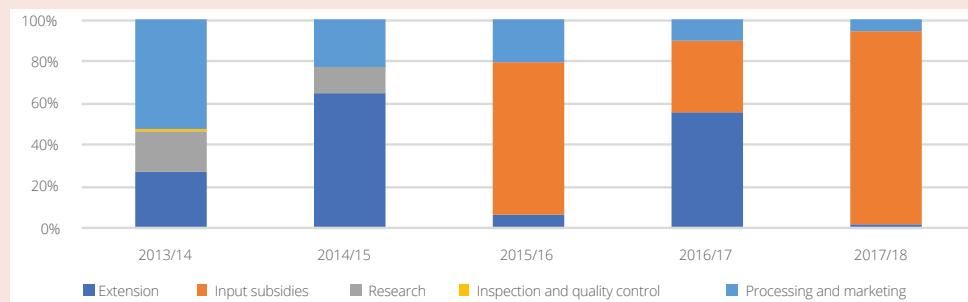
that it was profitability and not subsidies that drove technology adoption. Given increasing climate variability and pest outbreaks (such as fall army worm) in Uganda, it is vital that the government increases spending on agricultural R&D, irrigation, rural roads, and pest and disease management to build the resilience of agricultural production systems and rural livelihoods. To this end, farmers should be equipped with climate-smart agriculture technologies such as sustainable land and water management practices, and access to agro-weather and market (prices and quantities) information.

### Box 3.2. Operation Wealth Creation, the National Agricultural Advisory Services, and the Ministry of Agriculture, Animal Industry, and Fisheries

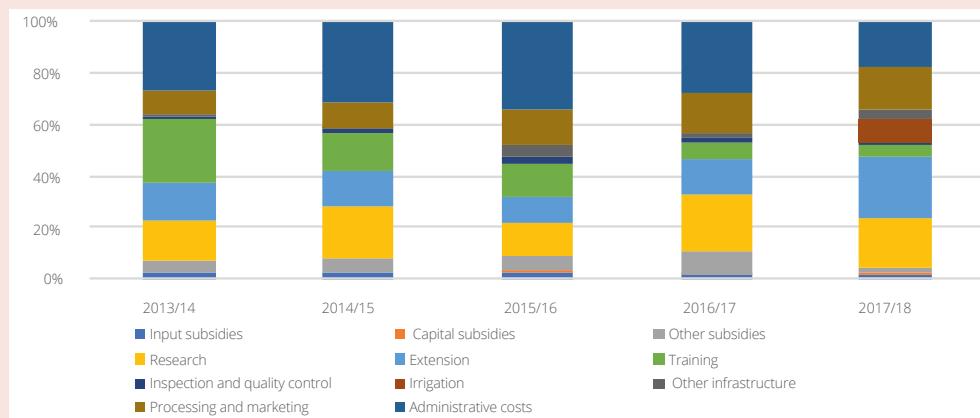
Created through a Presidential Directive in June 2014, Operation Wealth Creation (OWC) aimed to "cure the inefficiencies that had arisen in the NAADS program," and a "team of military officials" was commissioned to "oversee the supply of inputs originally in areas that had supported the military/political struggles that liberated the Country and with veterans as first beneficiaries."<sup>t</sup> Thus the core activity of OWC is to distribute inputs to farmers with the help of military personnel and in collaboration with NAADS staff. The operation centers on logistics and not on training.<sup>#</sup> Its introduction is reflected in the dominance of input subsidies in the 2015/16 NAADS budget (top figure). According to the budget database used for this review, input subsidies prior to 2015/16 were channeled through district budgets. Resources available to extension activities largely declined in 2015/16.

Extension services were replenished in 2016/17 through NAADS and MAAIF (bottom figure). In 2017/18, input subsidies dominated the NAADS budget again, but the share of extension services in the MAAIF budget increased widely. There has been some back and forth in the organization and funding of input distribution and extension services. The initial thinking probably was for OWC to focus on logistics and NAADS on training. Yet in 2017/18 all extension resources (salaries for trainers) were provisioned under MAAIF, and the NAADS budget became a channel for input subsidy procurement.

#### NAADS budget, disaggregated by subfunction



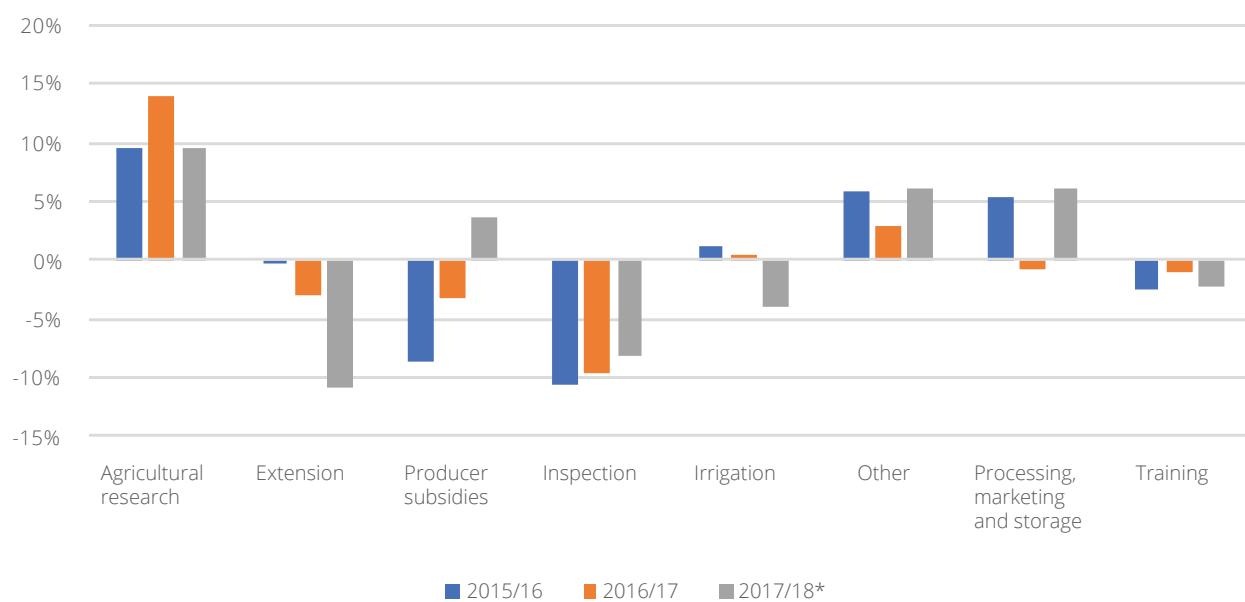
#### MAAIF budget, disaggregated by subfunction



The consequences of institutional restructurings and service delivery should be examined with care. The increase in the extension budget at MAAIF goes against the spirit of decentralization promoted in the DSIP and ASSP. Indeed, both documents identify extension as a key function of local governments. Budget management should reflect the institutional roles and responsibilities outlined in the agriculture sector's strategic frameworks.

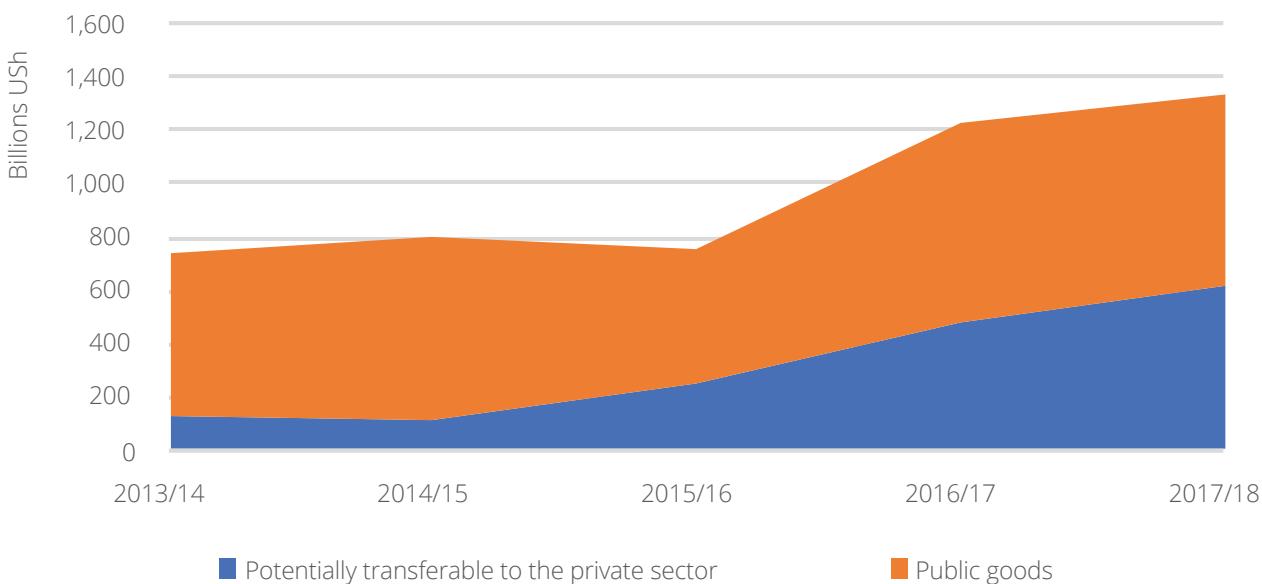
*Source:* <sup>t</sup> Republic of Uganda (2017: 2). <sup>#</sup> ACODE (2015: 5).

**Figure 3.8. Gaps between observed (final) PEAS allocations and ASSP targets for agricultural subfunctions (deviations from relative shares)**



Note: Gaps for 2017/18 were computed using budgeted expenditures from the PEAS database.

**Figure 3.9. Relative size of agricultural subfunctions that could be assumed by the private sector within budgeted PEAS**



Source: Authors.

Note: Subfunctions that could be transferred to the private sector are input subsidies, processing, marketing, and storage.

### 3.4 Conclusions

**58** Although the final share of public spending on agriculture (PEAS) more than doubled in real terms between 2013/14 and 2016/17, the share of PEAS in total public expenditure (PE) remained low throughout the period, averaging 3.6 percent. Uganda's share is also low compared to that of its East African neighbors (Kenya, Rwanda, and Tanzania) and the Maputo/Malabo Declaration target of 10 percent, but it is higher than the SSA average of 2.0 percent. Given the tight fiscal space and competing needs for public resources from other key sectors such as infrastructure (transport, energy, and water) and human development (health and education), it is unlikely that spending in agriculture will increase in the short-to medium term. To justify an increase in budget allocation to move toward the 10 percent target (which is aspirational, as only a few African countries have achieved or are close to achieving it), MAAIF first needs to improve the quality and effectiveness of spending in the sector.

**59** The economic efficiency of PEAS was low, as depicted by the small share of capital expenditures (which are necessary for spurring inclusive growth) in the development budget. Between 2013/14 and 2017/18 the development budget in the agriculture sector declined from an average of 80 percent to 67 percent. The share of PEAS going to input subsidies increased from about 19 percent in 2013/14 to about 25 percent in 2017/18 (with a high of 33 percent in 2015/16). This increase was largely at the expense of extension and advisory services, whose share declined from about 37 percent in 2013/14 to 10 percent in 2017/18. Other important functions such as inspection and quality control, feeder roads, and storage had a combined share of only

about 4 percent of total PEAS. Spending on research was starting to increase, but it was cut from 17 percent in 2013/14 to 11 percent of the total budget in 2017/18. The private sector cannot finance these expenditures. But they are critical for leveraging private investments in the sector, as they contribute to improving access to markets, increasing value addition, and enhancing resilience to climate change and variability.

**60** National decentralization objectives are not fully matched by the allocation of resources. Local governments receive a much lower share of final PEAS than agriculture-related ministries. Collectively, MAAIF, NAADS, NARO, and other SAGAs capture the bulk of the allocations in the sector (approximately 92 percent). The allocations to local governments declined from 37 percent in 2013/14 to about 7 percent in 2017/18, falling slightly short of the ASSP target of 10 percent. Given that local governments provide frontline agricultural services such as extension and advisory services, market information services, and rural infrastructure, their budget allocations need to be increased. MAAIF should find ways of reducing its headquarters operating costs and should retain a modest budget for its policy, strategy, and regulatory functions.

**61** The technical efficiency of PEAS was also low, as donor-funded projects continued to suffer delayed implementation. Delayed budget ratification by Parliament, and the untimely and insufficient release of counterpart funds by MoFPED, are beyond the purview of MAAIF, yet these constraints cause several years to pass before a donor-funded project can be launched in Uganda. Other constraints, including weak procurement and financial management capacity, improper appraisal and feasibility work, poor coordination of project preparation and implementation between MAAIF and local governments, and

inadequate operating budgets for technical staff are within the mandates of the ministry itself. These result in high cost overruns, low-quality work, and other kinds of wastage. MAAIF must work with MoFPED, MoLG, and local governments to address these policy and operational constraints.





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# **UGANDAN INSTITUTIONAL ENVIRONMENT & BARRIERS TO IMPROVING AGRICULTURE PUBLIC EXPENDITURE**

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**1 This chapter surveys the policy and institutional environment for agriculture, focusing on the organization and coherence of policy making, planning, and budgeting for the agriculture sector and on the roles of the central and local government in that process.** This discussion lays the groundwork for the remainder of the chapter, which is a deeper exploration of how barriers and enablers at work in these institutions influence the efficiency and effectiveness of public expenditures and the delivery of services in the agriculture sector.

## 4.1 The Policy and Institutional Framework for Agriculture

**2 This section describes the policy framework for agriculture and illustrates the roles and responsibilities of the main central and local institutions** in developing policy and engaging in the planning and budgeting process for agriculture. Drawing on this institutional perspective, the subsequent section will focus on ways to improve the efficiency and effectiveness of public expenditure in the agriculture sector.

### 4.1.1 The national policy and institutional framework

#### Pillars Of The National Policy Framework

**3 The pillars of the national policy framework are the Uganda Vision 2040 and the National Development Plan (NDP).** Launched in April 2013, Uganda Vision 2040 is the nation's long-term development strategy. It describes the development paths that will bring about Uganda's vision of "A Transformed Ugandan Society from a Peasant to a Modern and Prosperous

Country within 30 Years." Vision 2040 will be realized through the implementation of successive five-year NDPs. One priority of Vision 2040 is to enhance agricultural productivity and value addition by investing in new technologies, reforming the agricultural extension service, improving land governance, enhancing market access, and improving value addition.

**4 The second five-year plan (NDP II), covering FY2015/16–2019/20, was introduced by the president "to propel Uganda towards lower middle-income status by 2020,** in line with the aspirations of Uganda's Vision 2040." It aims at strengthening Uganda's "competitiveness for sustainable wealth creation, employment and inclusive growth." Agriculture is identified as a development priority in NDP II, although the plan devoted only five general pages (out of 344) to the sector .

**5 The key targets for agriculture in the medium term are:** (1) increase productivity by farmers to at least 50 percent of the yields at research stations; (2) transform subsistence farmers (producing for their own consumption) into enterprise farmers (producing for consumption and responding to market needs), and transform smallholder farmers into commercial farmers; (3) increase food security and food availability in all parts of the country; (4) increase agricultural exports to at least US\$4 billion per year; and (5) reform and strengthen agricultural service institutions such as research, extension, and regulatory bodies to make them effective and efficient.

## The Ministry of Finance, Planning, and Economic Development

**6** As part of its mission to “formulate sound economic policies, maximize revenue mobilization, [and] ensure efficient allocation and accountability for public resources,” MoFPED is responsible for ensuring that sectoral investments, including investments in agriculture, are well coordinated and appropriately funded. MoFPED comprises five directorates, including the Budget Directorate, which is responsible for analyzing, assessing, and challenging spending proposals. Each sector is required to submit a written response explaining areas of under-performance, and MoFPED regularly calls together staff across line agencies for training and briefings on budget preparation, execution, and management.

**7** During budget preparation, budget officers in respective line ministries must submit each iteration of the budget to MoFPED in person, requiring extensive face-to-face interaction among staff in ministries and agencies. Regular slippages in the budget calendar, and delays in sending final budget ceilings to spending agencies, weaken the quality of the budget process, however, and limit the potential for input from below (Krause et al. 2016). Line ministry officials are said to feel that MoFPED dictates rather than coordinates, and that some consultation processes are tick-box exercises rather than genuine opportunities to influence the budget process. MoFPED insists that new budgeting procedures introduced over recent years have led to better performance monitoring and better budget discipline.

## The National Planning Authority

**8** The NPA is one of 11 autonomous agencies under MoFPED. It was established by an Act of Parliament in 2002 to be the principal statutory agency responsible for the management of national and decentralized development planning. The NPA’s primary function is to produce comprehensive and integrated long- and medium-term plans, like Vision 2040 and the NDP. There are two directorates in the NPA: (1) Development Planning and Research and (2) Development Performance. Development Planning is responsible for coordinating and spearheading planning at the national and decentralized levels. It has six departments, including the Department of Local Government Planning.

## The National Budget Framework Paper

**9** The NBFP, issued annually by MoFPED, shows the budget strategy for the next financial year. It is the mechanism for the government to implement its medium-term policy objectives as specified in the NDP—in other words, the NBFP provides the link between NDP policies and the annual planning and budgeting cycle. The NBFP is revised every year to reflect changes in the macroeconomic framework, including fiscal resource projections. The NBFP has two parts: Part 1 essentially sets out the macroeconomic forecast and the resource envelope, and Part 2 provides details on proposed sector plans and expenditures.

## The Uganda Bureau of Statistics

**10** The Uganda Bureau of Statistics (UBOS) is the principal agency for collecting, processing, analyzing, and disseminating data, and it is responsible for coordinating and supervising the National Statistical System. Formerly the Statistics Department under MoFPED, it was transformed into a semi-autonomous body by the Uganda Bureau of Statistics Act, 1998. The bureau's main tasks as identified in the 1998 act are: (1) providing high quality central statistical information services on social, environmental, and economic conditions in the country; (2) providing guidance, training, and other assistance as may be required to other users and providers of statistics; and (3) being the focal point of cooperation with statistics users and providers at regional and international levels. UBOS takes the lead in providing statistics for the agriculture sector, in conjunction with the smaller and limited-capacity Statistics Unit in the Planning Department of MAAIF.

### 4.1.2 The Sectoral Framework

#### National Agriculture Policy

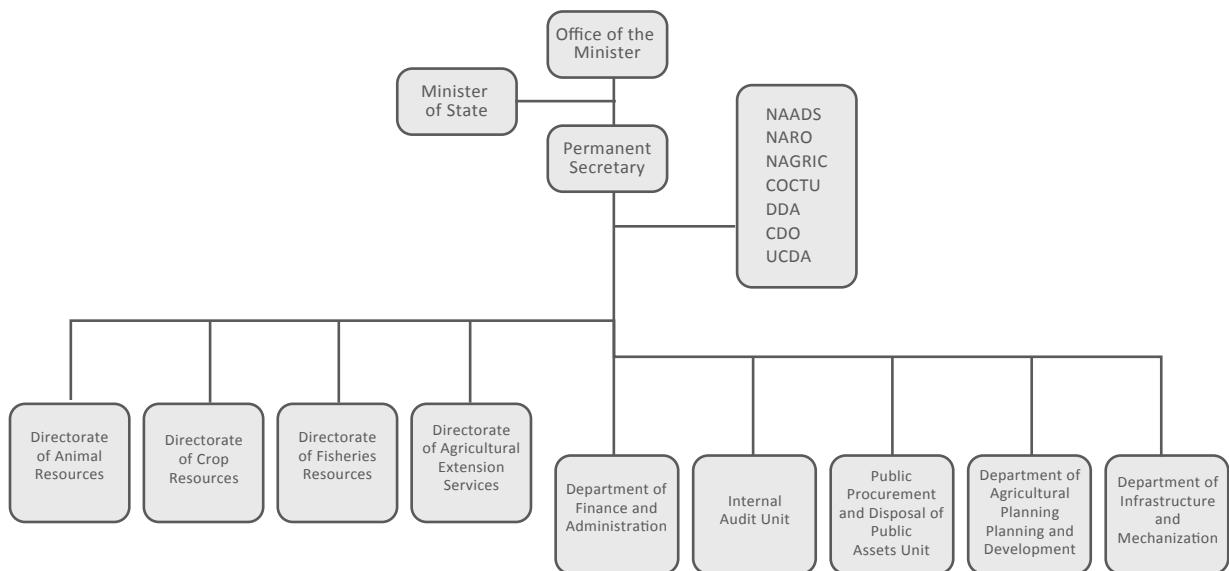
**11** Achieving the CAADP goals is a key pillar of the 2013 NAP, and its main objectives are to achieve food and nutrition security and to improve household incomes. The main interventions for achieving these objectives are: (1) production and value addition according to agricultural zones; (2) internal and external trade; (3) sustainable use and management of agricultural resources; and (4) development of human resources in the agriculture sector. By implementing the NAP, the GoU aspires to "transform the agriculture sector from subsistence farming to commercial agriculture" and thereby "make agriculture profitable, competitive

and sustainable and provide food and income security to the citizenry."

## MAAIF and its agencies

**12** At the center of much of the agricultural policy narrative is MAAIF, which consists of a headquarters in Entebbe and several semi-autonomous agencies. The structure of MAAIF is outlined in Figure 4.1.

**13** **MAAIF headquarters.** Key responsibilities of the ministry headquarters are to formulate and support agricultural policy, sector planning, regulation, standard setting, quality assurance, sector monitoring, and guidance. The headquarters is also responsible for supervising agricultural staff in district governments. Recent changes at MAAIF Headquarters have expanded three directorates to four (Animal Resources, Crop Resources, Fisheries, and Extension). Within each directorate are two to three departments headed by commissioners, a few standalone departments (most notably one for planning), and four specialist units.

**Figure 4.1. Structure of the Ministry of Agriculture, Animal Industry and Fisheries**

**14 MAAIF agencies.** MAAIF agencies, with their own allocations/votes under the MAAIF budget, are NARO, NAADS, UCDA, CDO, NAGR&DB, COCTU, and DDA. The agencies of MAAIF, operating at both the national and district levels, are responsible for executing approved plans and projects.

## Agriculture Sector Plans

**15** MAAIF has published agriculture sector plans since 2004; before that, there was the multisectoral Plan for the Modernization of Agriculture (PMA, 2001).<sup>17</sup> The current round of plans probably begins with the second Development Strategy and Investment Plan (DSIP II), published in 2010 as part of the CAADP process.

**16** The planning period for DSIP II ended in 2014, and the document was superseded by the Agriculture Sector Strategic Plan (ASSP) 2015/16–2019/20. The ASSP focuses on 12 “priority” commodities (bananas, beans, maize, rice, cassava, tea, coffee, fruits, vegetables, dairy, fish, and livestock) and four “strategic” commodities (cocoa, cotton, oilseeds, and oil palm) based on “their contribution to household income and food security.” The budget needed to implement the ASSP has been “computed at USh6.97 trillion (US\$1.88 billion equivalent) over the 5-year period.” However, “as interventions will be funded through prudent resource allocation,” ASSP also provides for a “constrained budget” in line with NDP II, amounting to USh4.6 trillion (US\$1.24 billion equivalent).

<sup>17</sup> Famously said by the PS, MoFPED (at the time) to be neither a plan nor about the modernization of agriculture, nor even specific to agriculture, the PMA was a framework which set out the strategic vision and principles upon which interventions to address poverty eradication through transformation of the agriculture sector could be developed. It identified priorities for interventions and activities in the form of seven pillars, to be implemented by various government ministries and local government, and a non-sectoral conditional grant to be administered by the PMA Secretariat, but allocated through local government. Much lauded at first, it slowly died as a process, largely due to the challenges of getting all the stakeholders to work together.

**17 Indicative budgets are shown by strategic area in ASSP with no detailed breakdown of the costs.** There is no prioritization of interventions or work plan in the ASSP: "In developing the budgets of the ASSP, consideration has been given to the need to remain within reasonable limits ...it is also necessary to take into account the equitable distribution of the budgets among the various priorities and commodities so that allocation to one will not be at the expense of other priorities...." In other words, all existing vote-holders get a share of the allocation, pretty much in line with the share they have been receiving.

### The MAAIF Budget Process

**18 From the viewpoint of the agriculture sector, the whole budget exercise, at least in principle, lasts nine months,** from the national consultative meeting scheduled to be held in October, at which the MTEF ceilings for each line ministry are announced, to the reading of the National Budget in June the following year.

**19 The BFP for agriculture is prepared in the Planning Department at MAAIF with some support from the Agriculture Sector Working Group (see below).** Annual assessments of performance against the targets, year on year, are undertaken and presented to the ASWG. However, the value of these assessments (beyond broad budget utilization) is hampered by the availability of data and the capacity to undertake meaningful analysis. The key objective for the sector, for several years now, has been to increase agricultural production and productivity, presumably through investments in irrigation schemes and research and extension services. Less attention has been given to addressing access to markets (for inputs, output, and finance) and value addition (post-harvest

handling and agro-processing). The main stages in the budget formulation process are summarized in Box 4.1.

### The Agriculture Sector Working Group

**20 A key institution in the planning and budget process is the Sector Working Group (SWG).** The SWG for agriculture includes MAAIF's heads of department and representatives of civil society, donors, the private sector, and farmers/smallholders. MoFPED initiated the SWG approach and still has a key role in promoting it. The intention was that SWGs would provide a multi-stakeholder platform and consultative mechanism for formulating public expenditure policy, setting priorities and planning. In this capacity they are expected to review and sign off on the NBFPs, monitor performance, and ensure that projects and programs are consistent with the NDP II and with sector priorities. The ASSP for MAAIF describes the SWG's other responsibilities, including: (1) pursuing solutions to structural, institutional, and other constraints to effective ASSP implementation at the central, zonal, and local levels; (2) reviewing mechanisms for enhancing stakeholder participation in implementing the ASSP; and (3) reviewing the agriculture BFP as a basis on which the annual budget for the sector is compiled.

### Box 4.1. The Budget Preparation Process

*October: Draft Budget Ceilings*

- MoFPED distributes Budget Call Circular to all ministries, agencies, etc., with inter- and intra-sector MTEF allocations
- MoFPED hosts a Budget (Framework) Consultative Workshop

*November – December: Preparation of Sector Working Group Reports*

- Sector working groups use indicative budget ceilings to arrive at inter-sector allocations and prepare Sector Budget Framework Paper (BFP)

*January: Preliminary Estimates*

- Sector BFP reports discussed with MoFPED during ministerial consultations
- Ministries and agencies prepare draft budget estimates on this basis

*March: National Budget Framework Paper to Cabinet and Parliament*

- MoFPED compiles Sector BFPs into the NBFP, which is presented to the cabinet
- After NBFP is considered and approved, it is submitted to parliament

*April-May: Parliament and Public Expenditure Review*

- The Budget Committee of Parliament discusses the NBFP and presents recommendations to the president and MoFPED
- National Public Expenditure Review meeting is held at which the NBFP is discussed

*June: Finalization of Budget*

- Based on parliamentary/Public Expenditure Review recommendations, the proposed Budget and Medium-Term Expenditure Framework are amended
- The Budget is read

*Source: GoU (2007).*

### 4.1.3 The Local Government Structures

21 In the early 1990s, the GoU issued a new policy (Republic of Uganda 1993) that decentralized powers essentially to two levels of local government: the district (LC5) and the subcounty (LC3). These levels were mandated to formulate and implement development plans; draft, approve, and execute budgets; raise financial resources and use them to respond to local priorities; make ordinances and bylaws; and manage and deliver services that had previously been the responsibility of the central government. In 1997, the Local Governments Act formalized this structure, and central government resources were made available to enable the new system to proceed.

22 At the top of the five-tier local government structure is the district, comprising several counties and municipalities lying within its territory. It has primary responsibility for subnational service delivery. An elected council (LC5) presides over the district, headed by a chair and an executive committee. On the technical side, the Chief Administrative Officer is the head of the district administration. Originally, this officer was appointed by the LC5, but central government has taken back these powers. The district structure includes the sector departments such as agriculture, education, health, works, water, environment, and planning. The elected leaders are supposed to oversee the activities of the technical staff. Membership of the LC5 must be at least 30 percent women.

**23** Below the district is the county council (LC4), constituted by members of subcounty executive committees. These members elect an executive committee, which has limited powers.<sup>18</sup> Counties do, however, constitute the parliamentary constituencies, with each county represented in the national parliament by an elected member.

**24** The next lower level is the subcounty (LC3), made up of several parishes. The subcounty chief works with an elected council, which has a chair, an executive committee, and elected councilors representing the parishes. The subcounty chief heads a technical team of officials, who are responsible for overseeing service delivery, as inspectors and coordinators in, for example, the sector ministries of agriculture, health, education, and water provision.

**25** At the LC3 and LC5 levels, the responsibility to implement council decisions and central government directives belongs to appointed civil servants, who are overseen by the Chief Administrative Officer. In theory, elected leaders oversee the work of civil servants and wield authority over them. Tensions inherent in the relationship of the two groups frequently arise, however, and they can negatively affect service delivery.

**26** A parish (LC2) comprises several villages. Each parish has a council whose members include all the chairpersons from the parish's constituent villages. The role of parish councils and their committees is largely restricted to settling local disputes referred from LC1s, but currently they are dormant.

**27** At the base of the five-tiered local government structure is the village, which is Uganda's smallest political administrative unit. Uganda has some 60,000 villages (USAID 2015), and the average village comprises 50–100 households. Each village has a council (LC1) whose members include all residents 18 years and older. Presiding over each village council is an executive committee, with a chairman and nine members. These committees have no service delivery function but are meant to "mobilize" community members for matters of collective interest.

**28** Another element in the local government structure is the Resident District Commissioner from MoLG. The commissioner represents the central government at the district level and is responsible for supervising staff in the districts, providing advice, linking a district government with the center, and overseeing implementation of national policies.

## 4.2 Institutional Barriers to Improving Public Expenditure in Agriculture

**29** This section develops a detailed analysis of institutional barriers and enablers for improving the efficiency, quality, and effectiveness of public expenditures and the delivery of services in Ugandan agriculture. The analysis attempts to answer three fundamental questions: What are the barriers for effective agricultural policy implementation? How could public expenditure for agriculture be improved from an institutional perspective? What is the relative balance and efficiency between central and local government spending in the context of fiscal decentralization?

<sup>18</sup> Republic of Uganda (2001). See also Oxford Policy Management (2007).  
See Rwamigisa et al. (2013) and Kjaer and Joughin (2012).  
See World Bank (2010a).

**30** The discussion will comment on actual performance relative to policy where possible. It will be seen that the policy narrative throughout the period under review is that the government aims to bring services closer to the people and in the process somehow generate improved productivity. As this review will emphasize, policy in the Ugandan agriculture sector is not what is laid out in the many documents but is what is represented by the annual budget and how it is spent.

#### 4.2.1 Institutional Barriers at the National Level

##### Weak Agriculture Sector Planning And Budgeting Capacity

**31** The planning process described in the previous section is top down, lacks analytical detail, and is deficient in execution and in monitoring progress. For example, NDP II was prepared by NPA with only limited input from MAAIF, perhaps because of the ministry's lack of capacity.<sup>19</sup> Exactly how any of the NDP II goals are to be achieved, let alone what the role of MAAIF might be in pursuing them, is not discussed in the NDP document. The linkages between the NDP II, ASSP, MTEF, and budget targets are not obvious. The ASSP would be more strategic if it gave some indication of: (1) how "prioritization" was assessed; (2) the expected outcomes; and (3) how the proposed investments fit into the MTEF

ceilings. In a detailed analysis of the FY2017/18 budget, NPA notes that budget performance across sectors of the economy, including agriculture, was unsatisfactory. The sector budget targets, according to the NPA analysis, significantly differed from NDP II targets, and slow budget releases and low absorption made matters worse.

**32** The Agriculture Sector BFP is rarely followed to the letter. In most cases, the MAAIF budget is made up of last year's figures with a few extrapolations and adjustments. The process is further weakened by the fact that the BFP may be rehashed before cabinet approval without any input from the technical staff. And should a real need arise for additional budget later in the year, a "supplementary budget"<sup>20</sup> can be requested (and has been many times).<sup>21</sup> Records for supplementary budgets have not been aggregated over the years. But, for FY2015/16, the MAAIF supplementary budget totaled USh9.8 billion (USh6 billion for NAADS and USh3.8 billion for CDO).

**33** MAAIF leadership has articulated the need to strengthen planning within the ministry. In June 2018, a new commissioner was appointed to head the understaffed MAAIF Planning Department, but part of the problem, as MAAIF will concede, is that the Planning Department lacks authority over the four MAAIF directorates. The possibility of elevating the Planning Department to a directorate has been mooted many times since the Functional Review of 2002. It was picked up during the DSIP restructuring process of 2009/10, for instance, but never

19 In fact, the performance of NPA may not be much better. Krause et al. (2016) write: "While the NPA is responsible for NDP, interviewees suggest that the real powers rest with MoFPED, which sets the MTEF and thus shapes the country's development priorities."

20 A Supplementary Budget is an expenditure statement introduced to provide funds to the government to meet new or additional expenses in a fiscal year.

21 As illustrated in New Vision (April 26, 2017); the newspaper reports the minister telling the Parliamentary Committee that USh21 billion of the MAAIF budget will be allocated to backing up the president's pledge to provide one million hoes to "less privileged farmers" and 167 tractors to "various farmers' groups."

happened. The top policy management team can be reluctant to take policy decisions around planning and budgeting, which are essential to improve the efficiency of resource use.

**34 MAAIF has defended its implementation performance over the years by focusing on “insufficient resources.”** To some extent, however, the lack of resources is an issue of allocation efficiency. Records show that consistent with the ASSP budget targets (Table 3.9, Chapter 3), MAAIF allocated more funds to input subsidies, followed by extension and advisory services, than to R&D, irrigation, and rural roads, which could have a sustainable impact on increasing productivity and building resilience. The past weakness of planning and budgeting at MAAIF Headquarters was one reason that contributed to the agriculture sector being subject to ad hoc interventions by either State House or MoFPED and NPA.

### Reliance On Projects And Special Programs

**35 Nothing is said in the ASSP about projects at MAAIF or how they are managed and financed.** In its latest Policy Statement (Republic of Uganda 2018), MAAIF appears to have 37 discrete projects. The analysis of the level and composition of PEAS (Chapter 3) shows that a large proportion of resources budgeted for the agriculture sector come from external sources. Over 2013/14–2016/17, an average of 33 percent of agriculture sector budgets were sourced externally, particularly through donor-funded projects. Such a high share of donor support may weigh negatively on the predictability and sustainability of sector budgets. For example, the NARO budget for FY2018/2019 decreased by USh22 billion over the previous fiscal year (a reduction of 26 percent) following completion of

the Agricultural Technology and Advisory Services Project. The GoU could not immediately fill this financing gap, which inevitably has a significant impact on NARO’s operational effectiveness.

**36 Heavy reliance on projects can also create “islands” of authority within MAAIF.** These islands are the basis on which funds, power, influence, and control are traded. Project coordination units, which aim to ensure timely project implementation may sometimes create parallel structures that undermine the formal structure of civil service authority. Budget execution rates have also been lower for projects than for government-funded activities, partly owing to the procurement and disbursement procedures of donor agencies. Establishing Single Project Implementation Units that support implementation of several projects can improve efficiency, the sharing of specialized capacity and the sustainability of expertise within the ministry.

**37 Special GoU programs to provide immediate ad hoc solutions are becoming the new norm.** For example, the MAAIF budget for FY2016/17 saw an increase of nearly 75 percent over the FY2015/2016 budget. The increase was mainly to raise GoU allocations for expenditures on: (1) “Wages,” for the additional agricultural extension staff to be recruited; (2) “Non-Wage Recurrent,” all of which was allocated to UCDA to produce and distribute coffee seedlings; and (3) “Domestic Development,” almost entirely for the NAADS Secretariat (presumably to finance free input procurement and distribution by OWC), the construction of grain storage facilities, and the purchase of hand-hoes for distribution to smallholders.

## Ineffective Sector Working Group

**38** The agriculture SWG has some authority to reallocate the budget within the sector to reflect ASSP, NDP II, and MTEF priorities, but it may never have used that authority. The SWG would be the entry point for agriculture sector stakeholders to bring in ideas for reforms, and it could be much more closely involved with annual work planning and budgeting by MAAIF, in addition to providing oversight of budget execution through monitoring and evaluation. However, few SWG members have the time to scrutinize the annual activity plans and budgets for the sector, however.

**39** The SWG's hesitation to get to grips with the big sector policy and strategic issues arises partly from the way it convenes and conducts its meetings, which especially deters busy representative of the private sector and farmer organizations. MAAIF commits to forward all relevant documents for review and consideration by working group members at least one week before the meetings, and to deliver the minutes of the meetings no later than one week after the meetings. Unfortunately, MAAIF often has not been able to fulfill this promise. Consequently, SWG members rarely undertake a critical review of MAAIF budgets and execution performance. Enhanced SWG oversight would help to improve budget implementation performance by MAAIF. An initiative by MAAIF and development partners is planned during 2019 to review the functioning of the ASWG, the experiences of other sector SWGs and agreement of changes that would strengthen its functioning and effectiveness.

## Weak Coordination Under the Agriculture, Rural, and Urban Development program

**40** Programmatic budgeting means that several ministries, departments, and agencies play important roles in planning, budgeting, and executing budget under the Agriculture, Rural, and Urban Development (ARUD) program. The ARUD program includes MAAIF (and all its semi-autonomous agencies); MoLG; MWE; the Ministry of Lands, Housing and Urban Development (MoLHUD); local governments; and the Office of the Prime Minister. The analysis of the level and composition of sector expenditures (Chapter 3) shows that allocations to these rural development-related ministries and local governments average 33 percent of the PEAS. Each ministry in the ARUD program has its own SWG, however, and there is no framework for coordinating those SWGs to ensure complementarity in planned and budgeted activities, which would improve the technical and economic efficiency of expenditures in the sector.

**41** The intention of the proposed Uganda Platform for Agricultural Coordination and Transformation (U-PACT) is to "spearhead coordination and agricultural transformation," and it may help to improve coordination under the ARUD program. The core ministries involved are MAAIF, the Office of the Prime Minister, MoFPED, MWE, MoLG, MoLHUD, the Ministry of Trade, Industries and Cooperatives, and the Ministry of Works and Transport. Other relevant ministries can be co-opted from time to time as the need arises. One of the lessons learned from implementing the PMA is that a multisectoral coordination framework is complex and difficult to manage. Whether U-PACT will effectively coordinate the ARUD program remains to be seen, but it is certain that

structural issues will need to be addressed to avoid the pitfalls encountered with the PMA coordination framework.

## Weak Linkages Between MAAIF and Local Governments

**42** District or local government plans and budgets are insufficiently integrated in the MAAIF budget. The local government has three sources of funding: unconditional grants, conditional grants, and equalization grants, each with different requirements. The abolition of the graduated tax has reduced the local revenue base.

## Low Governance Capacity

**43** Capacity within MAAIF to perform the functions related to procurement, financial management, environmental and social safeguards, and monitoring and evaluation is low. These deficiencies are partly caused by the low number of qualified and experienced staff to carry out these functions; and partly due to poor understanding of the requirements, procedures, and processes of various donor agencies. Low procurement capacity delays the approval of contracts and leads to cost overruns; when inadequate procurement capacity is coupled with low financial management capacity, payments to service providers take longer than expected, attract penalties, and result in low budget execution rate. Low capacity to implement environmental and social safeguards makes it difficult to ascertain the sustainability and inclusiveness of MAAIF programs. A stronger monitoring and evaluation system would support performance assessments related

to physical implementation of approved annual work plans, their outcomes and impacts, and budget execution rates, in addition to reducing transparency and accountability to citizens.

## 4.2.2 Agriculture Sector Reforms In Uganda

**44** Over the years, MAAIF has been responsible for implementing substantial reforms in the sector but has struggled with all of them: The Plan for Modernization of Agriculture (PMA) in 2001,<sup>22</sup> NAADS in 2007,<sup>23</sup> and the ministry's own reorganization<sup>24</sup> (Box 4.2). Almost all these reforms sought to set definite priorities and align them with functions and the budget.

**45** Despite efforts at least since the 2000s, the government retains an outsized role in agriculture, where its continued presence creates opportunities for rents for public officials and political elites and leaves little room for private sector participation and development. Government programs include free distribution of inputs through NAADS and the OWC, farm implements (hand hoes), and tractors. The government seems more focused on transforming subsistence farming into modern commercial-oriented farming with the free distribution of inputs than with the exigencies of supporting policies that (1) enhance the capacity of MAAIF to efficiently and effectively deliver on its mandates; (2) increase public investments in infrastructure (such as irrigation and rural roads); and (3) crowd in private sector investment in agribusiness, such as firms that market inputs and outputs and provide agricultural services (for instance, mechanization and financial services).

22 Republic of Uganda (2001). See also Oxford Policy Management (2007).

23 See Rwamigisa et al. (2013) and Kjaer and Joughin (2012).

24 See World Bank (2010a).

**46** Part of the MAAIF mandate is to support and build capacity in district authorities so that they can provide extension advice, provide regulatory and quality assurance services, and collect agricultural statistics and information. Given that NAADS in recent years has been allocated the lion's share of the MAAIF budget for procurement and distribution (through the OWC) of free inputs, the ministry's capacity-building functions are grossly underfunded.

#### **Box 4.2: Reform initiatives of the Ministry of Agriculture, Animal Industry, and Fisheries since 2000**

**2001:** As part of the Plan for Modernization of Agriculture (PMA), MAAIF undertook a "Core Functional Analysis" that identified priorities for the ministry (policy and planning, regulatory services, agricultural promotion services) and proposed a new structure reflecting those priorities. The new structure was not implemented, "largely because of lack of consensus within MAAIF and other key ministries."<sup>t</sup>

**2002:** The "Reorganization of MAAIF" study followed from the Core Functional Analysis. It made additional proposals for reorganization to better deliver relevant aspects of the Presidential manifesto and PMA, with an emphasis on results-oriented management and output-oriented budgeting, but it was not implemented.

**2009:** The ministry commissioned a "MAAIF Restructuring Report" as part of the process to approve the Development Strategy and Investment Plan (DSIP). The report, with its recommendations on restructuring, was submitted to the Ministry of Public Services (MoPS). During the dialogue with MoPS, a further study ("Review of the MAAIF Restructuring and Reform Process") was undertaken. The conclusions—presented in detail in the published DSIP (2010)—were to form a four-directorate structure with the creation of two new directorates (significantly, one of the new directorates was Planning and Policy). The proposals and a plan for transitioning to the new structure were approved by top management at MAAIF, the cabinet, and development partners in March 2010. The transition was linked to the move of key headquarters staff to Kampala in 2012. Although staff moved, restructuring never started. After two years funding expired, and staff went back to Entebbe.

**2011:** MAAIF commissioned a review of institutional linkages to "make proposals for facilitating effective cooperation and collaboration in the implementation of the DSIP between MAAIF, the sector agencies, local government authorities and other key stakeholders." The main findings were that no single or common institutional and regulatory framework existed, and its absence detracted from achieving coordinated DSIP implementation. The report had no specific outcome.

**2012:** MoPS initiated a functional review of MAAIF by Adam Smith International "to consolidate past public service reform initiatives dating back to early 1990s."<sup>#</sup> The report proposed modified but very similar structures to the MAAIF Restructuring Report. It also recommended creating an additional directorate of Regulatory and Quality Assurance Services. The recommendations were not implemented.

**2013:** The National Agricultural Policy contained nothing about reforming MAAIF.

**2015:** Part of the argument against creating new directorates has been that MoPS processes are "too unwieldy," but with the collapse of the National Agricultural Advisory Services (NAADS), a new Directorate of Extension *was* created, bringing back the very functions delegated to NAADS under the PMA.

**2015:** The Agriculture Cluster Development Project has International Development Association financing of US\$15 million for a component on "Project Management and Capacity Building for Policy, Regulatory, and ICT Functions of MAAIF," but this agenda is relatively limited.

**2018:** A proposed Uganda Platform for Agricultural Coordination and Transformation (U-PACT) is under consideration.

*Source: t DSIP (MAAIF 2010a). # Adam Smith International (2011).*

#### **4.2.3 Institutional Barriers at the District or Local Government Level**

**47** In the context of fiscal decentralization, the relative balance and efficiency of expenditure by the central and local governments needs to reflect the

functional responsibilities assigned to the respective levels of government. The functions of the central and local governments are clearly demarcated in Uganda's Constitution. To ensure efficient and effective service delivery by local governments, central government ministries, departments, and agencies

are responsible for providing direction and assistance through technical support, advice, supervision, and monitoring, with the purpose of ensuring adherence to guidelines on policy, strategy, standards, and regulations. The central government provides grant funding through the budget, and local governments, in turn, are responsible for planning and implementing their budgets in line with the guidelines.

**48 MoLG is mandated to coordinate implementation of the decentralization program.** To support efficient, effective, and sustainable service delivery by local governments, MoLG has four key responsibilities: (1) inspect, monitor, and, where necessary, offer technical assistance, supportive supervision, and training; (2) coordinate and provide advice for harmonization and advocacy; (3) link local governments with other ministries and departments, parastatals, the private sector, and regional and international organizations; and (4) research, analyze, develop, and formulate national policies, including those pertaining to local revenue mobilization through taxes, fees, levies, and rates.

**49 The efficiency argument in favor of decentralization is that local governments can interact with local citizens better than central governments because of their geographic proximity.** This interaction enables local administrations to spend the budget more effectively and with more impact. The argument is partly based on a theoretical assumption that when local governments tax their local communities, those people are likely to want something in return, and hence a local revenue bargain evolves in which local officials are held to account for the money which has been collected locally (Kjaer and Katera 2017). In other words, local taxation increases the likelihood that the demand for local service delivery is met.

**50 The division of responsibilities between central and local governments seems clear, but in practice, considerable difficulties emerge.** Based on the assigned roles and responsibilities, resources at the central government level should be weighted more strongly in favor of policy analysis and reforms, planning and technical assistance, R&D, and regulatory and quality assurance functions. For the local governments, resources should be weighted toward the delivery of agricultural services (such as advisory or extension services, animal health and veterinary services, agro-weather and market information services) and the development of rural infrastructure (irrigation, drainage, feeder roads). Intuitively, the bulk of PEAS spending should be directed to local governments where investments are needed rather than to the central government agencies. In practice this is not the case, primarily because of the erosion of the decentralization program, the fragmentation of districts, and low institutional capacity at the local government level. These constraints are briefly discussed next.

#### 4.2.4 Erosion Of The Decentralization Program

**51 Originally, in line with the principles of decentralization, the government intended for local governments to be financed by locally generated revenue,** which would be topped up by fiscal transfers from the central government. Locally generated revenue consisted of the graduated tax, fees from market dues and rates, various licenses, and property taxes. Revenue was collected at the subcounty level (LC3), which had the right to retain 65 percent of the collected revenue with the obligation to remit the balance to the districts.

**52** These locally generated revenues were to be supplemented by three types of fiscal transfers from the central government. First, unconditional grants would allow local governments discretion in the use of resources, while privileging five national program areas (agricultural extension, primary education, primary healthcare, feeder roads, and safe and clean water). Population size and geographical expanse are the main considerations in the allocation of unconditional grants, with population accounting for 85 percent of the weighting and geographical area 15 percent. Second, conditional grants would finance predetermined programs under the priority areas, ideally based on agreements between central government and the local governments. The third type of fiscal transfer consisted of equalization grants, a subsidy that came into operation in FY1999/2000. The central government would make equalization grants available to the least developed local governments so that they could meet minimum standards for service delivery.

**53** From the start, inevitably, revenues were insufficient for the levels of service delivery aspired to by local governments. The graduated tax, with its roots in the colonial era, was especially unpopular. The Local Governments Act required the graduated tax to be collected from all able-bodied male persons above the age of 18 and all able-bodied women engaged in gainful employment. According to studies undertaken by the Local Government Finance Commission, graduated tax contributed about 75 percent of locally generated revenues in districts and 35 percent in municipal councils in FY1997/98. Then, in 2005, in the run-up to the election, the GoU suspended the unpopular graduated tax. In one swoop, this action wrecked the finances of local governments, undermining service delivery, limiting the autonomy of districts,

and creating dependency on fiscal transfers from the central government. As a result, about 90 percent of the budget across all districts is currently financed by the central government.

**54** The share of the budget allocated to local governments has eroded substantially, from 31 percent in FY2010/11 to 21 percent in FY2015/16, and now averages less than 10 percent (ULGA 2016). Coupled with feeble local revenue generation, it has resulted in severe financial shortfalls for local governments. The decentralization of functions is not buttressed with increased allocation and spending in the agriculture sector; in other words, public spending on agriculture is increasingly centralized.

#### 4.2.5 Fragmentation Of Districts

**55** Aside from abolition of the graduated tax, the major development that torpedoed the decentralization dream has been the persistent creation of new districts. In 1995, Uganda had only 36 districts. The number had increased to 56 by 2002, to 80 by 2008, 112 by 2015, and further expanded to 125 by September 2016. The GoU argues that the expansion of districts is a response to the rising population and the quest for bringing government closer to the people. But those working in the districts are more cognizant of the evident problems with this approach. Staff are now shared out among the old and new districts, so already limited human resources are spread ever more thinly. There is increased administrative confusion, especially in the new districts, some of which have close to zero capacity and are poorly resourced. The quality of services is deteriorating steadily and the coverage across all districts is shrinking.

The limited budget for extension services has already been mentioned. But there is a long record of limited staff numbers in the districts and a long history of weak supervision.

#### 4.2.6 Low Institutional Capacity

**56** DFID (2013) describes institutional capacity at the local level in northern Uganda as follows:

*The district LGs [local governments] in Northern Uganda have very serious capacity problems, which constrains their effective service delivery. It has been observed that inadequate capacity in terms of staffing and skills at district level has led in some cases to inadequate planning and procurement capacity, including procurement delays and weak supervision of projects. Apart from the low staffing levels, the knowledge and skills gap identified are in the areas of planning and budgeting, procurement, financial management and reporting, M&E [monitoring and evaluation], records and data management, ICT, conflict and human resource management. Furthermore, the communities are equally not aware of their roles and therefore cannot hold the district leadership accountable.*

**57** These problems may be worse in the northern districts, but they are apparent to some degree in all districts. According to USAID (2015), staffing levels are worse (only about 45 percent of posts filled) in newly created districts, particularly those that are more remote and hard to reach. Another report (World Bank Group 2016) goes even further:

*The other major constraint identified was the low capacity and understanding of local economic development among local governments officials, including technical*

*staff, but particularly local councilors (elected politicians), who often have a low level of education and undertake actions that obstruct economic development. There is also a need for a change of attitude towards the private sector from being a major source of revenues for the LGs [local governments] to actors who need to be supported to generate economic growth and create jobs in the locality.*

**58** The desperate vacuum in extension service provision in the districts can hardly be mentioned too often; as emphasized by the World Bank (2015: 19), "the several thousand advisors in the field under NAADS have been let go, and even under optimistic projections, it is likely to take well over a year to replace them in the field under the new institutional configuration." In early 2017, the press reported in some detail that 1,945 extension officers had been recruited under the new system, but there were no operational budgets for them to perform their duties. MAAIF continues to recruit extension workers to reach a target of 4,000 in FY2018/19. The ministry has been lobbying hard for more budget to deliver extension services, but funding has not been forthcoming and threatens to make the recruited extension workers redundant.

#### 4.3 Conclusions

**59** Public expenditures on agriculture underperform because of structural deficiencies and capacity constraints—but even so, MAAIF has ample scope to improve the technical and economic allocation of public resources to spur growth in the sector. To achieve this improvement, MAAIF must continue with radical institutional reforms to reflect its new roles, including its role in delivering extension services (transferred from NAADS), and reinforce its role in policy and planning.

Champions are needed from within MAAIF, at the senior leadership level, to articulate the rationale, significance, and outcomes of the reforms.

- 60** "The balance and efficiency of central and local government spending must improve". Local governments should get a bigger share of PEAS than the current average of less than 10 percent. District fragmentation, underfunding, and low capacity at the local government level have caused the quality of services to fall across the board, even though the total number of people with ostensible access to some services may have grown.





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## **THE ROLE OF THE PRIVATE SECTOR IN PROVIDING AGRICULTURAL SERVICES**

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**1 Leveraging private sector investment in agriculture is critical to fully realizing the sector's potential for contributing to Uganda's Vision 2040.** Agriculture by nature is a private sector activity, with firms best positioned to understand market potential and to engage within their specific value chains. Moreover, the Maximizing Finance for Development principles dictate—rightfully—that scarce public resources be focused on those core public goods and services for which private financing is unlikely. A rigorous application of the Maximizing Finance for Development framework will help to identify those priority public functions.

**2 At the same time, the constraints to private investment in agriculture are well known, particularly within those value chains in which small-scale producers can participate fully.** This chapter reviews Uganda's experience and that of comparator countries to provide policy recommendations on innovative models of leveraging greater private sector investment in inclusive agribusiness, and to adjust public expenditures to facilitate private sector investments in agriculture. It does not assess the profitability or merits of specific value chains, given that hard data on private investments are difficult to obtain, commercially sensitive, and often indistinguishable from their regular business investments or working capital outlays.<sup>25</sup> Instead, the analysis focuses on current national and sectoral policies, strategies, and plans to promote private sector development in Uganda. It examines models for the private sector to provide agricultural services, together with the opportunities and constraints for bringing those models to scale. Case studies review how the private sector and cooperative

unions provide agricultural services to small-scale producers in various value chains. The discussion concludes with policy recommendations in support of inclusive private investment in the sector.

**3 The material for this chapter was gathered through a thorough desk review of key documents, case studies, and interviews with selected private sector actors.** That information was used to identify the key sector actors, identify the attractive commodity value chains for private sector service provision, identify incentives that enable producer groups to increase production, and assess public sector enablers of improved agricultural production.

## 5.1 The Private Sector and Agricultural Services in Uganda: Background and Context

**4 Guided by the Vision 2040, Uganda aims to transition from low-income to upper middle-income status within 30 years through private sector led development.** In this context, the private sector is defined as an element of the national economic system that is run by individuals and companies, rather than by the government, with the intention of making a profit. The GoU recognizes the private sector's key role in creating jobs, exploiting business opportunities, and—particularly in the agriculture sector—unlocking the potential in value chains. Through policy and liberal economic structural reforms, the government has consistently sought to create an enabling environment for these outcomes.

<sup>25</sup> Note that although this chapter sheds light on some investments made by the private sector as part of normal business operations, it does not take into consideration financial outflows related to Corporate Social Responsibility, a self-regulating business approach that contributes to sustainable development by delivering economic, social, and environmental benefits for all stakeholders.

**5 National policies and their implementation are the critical levers for easing the costs and risks of doing business with small-scale producers and integrating them into value chains.** The GoU has recently adopted a National Private Sector Development Strategy (2017/18–2021/22) to reinforce its objective of private sector led growth by improving the business enabling environment, accelerating industrialization, and supporting firm-level productivity and modernization.<sup>26</sup> The strategy seeks to strengthen the coordination of policies and initiatives geared toward growing and developing private enterprises. It also seeks to facilitate the management and measure the performance of national efforts to improve private sector competitiveness. In the absence of a public institution with a specific mandate to engage the private sector, it is hoped that this strategy will coordinate efforts across and within sectors, as well as with development partners, to achieve that engagement.<sup>27</sup>

**6 Missing from the current policy framework, however, is a clear incentive mechanism through which the public sector will support the private sector in providing agricultural services as public goods.** The perception is that public interventions to support private sector development are skewed toward manufacturing and industry, with incentive mechanisms such as land acquisition in the recently developed industrial parks and tax relief for imported machinery. Fewer interventions appear to enhance the performance and competitiveness of firms involved in the agriculture sector.

**7 A few strategies have rallied the private sector to identify investment opportunities in Ugandan agriculture, including the PMA, the Medium-Term Competitiveness Strategy (2000–05), and the first and second Competitiveness and Investment Climate Strategies (2005/06–2009/10, and 2011/12–2015/16). MAAIF in 2016 formulated the National Agricultural Extension Policy (NAEP) to guide, harmonize, and regulate the provision of agricultural extension services to farmers, farmer groups, and users of extension knowledge products in agricultural value chains throughout the country. The 2016 policy establishes MAAIF as the hub for implementing agricultural extension and related services to address shortcomings in service provision, respond to users' demands, take advantage of emerging opportunities, and support the much-needed progression of small-scale producers from subsistence production to market-oriented commercial agriculture.**

**8 The policy emphasizes that agricultural services will be provided through a “pluralistic, inclusive, equitable, decentralized, integrated, and harmonious system” that links all categories of “users” along the value chain with appropriate services and innovative technologies.** More specifically, the objectives of NAEP are: (1) to establish a well-coordinated, harmonized, pluralistic agricultural extension delivery system for increased efficiency and effectiveness; (2) to build institutional capacity for the effective delivery of agricultural extension services; (3) to develop a sustainable mechanism for packaging and disseminating appropriate technologies to all categories of farmers and other beneficiaries in the agriculture sector; and (4) to empower farmers and other value chain actors (including youth, women, and

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26 MoFPED (2017).

27 Global Partnership for Effective Development and Co-operation (2018).

other vulnerable groups) to participate effectively in agricultural extension processes and build their capacity to demand services. What is striking about the NAEP objectives, strategies, and implementation guidelines is that they say so little about the role of private sector actors in the provision of extension services.

**9** The government has continued to offer extension and agriculture-related services, despite disappointing results and increasing criticism regarding low staffing, limited engagement with farmers, and extension workers who are not trained to address emerging threats in the sector. NAADS, designed as a demand-driven program to deliver agricultural advisory services, was criticized for targeting only "elite" farmers with a capacity to evolve into commercial farmers. Despite some success, NAADS reached only 22 percent of the target farmers, and a majority of rural smallholders expressed no trust in the program. A study on trust and the effectiveness of NAADS identifies trust as the starting point for explaining farmers' perceptions of the effectiveness of extension service delivery programs in Uganda (Turyahikayo and Kamagara 2016).

**10** Like NAADS, the OWC, one of Uganda's biggest civil-military operations, faces myriad challenges in serving farmers, including the low number and weakness of farmer groups and institutions, late delivery of inputs, inputs of low quality and quantity, and high mortality rates in planting materials and breeding stock owing to drought and poor management. The stringent eligibility requirements—for instance, land is a basic requirement to participate in the program—do not favor women and young people, who either have no land or cannot make important decisions related

to land use. Instead, the program has been captured by elites who claim to be farmers and distribute inputs among themselves (Tabaro and Katusiimeh 2018). Amid these implementation inconsistencies and gaps in service delivery, it is not clear who is delivering which services to whom, and although it seems that private companies have increased their role, their contribution has not been fully documented.

**11** Garforth and Jones (1997) identify four main drivers of change in the traditional public extension services: the economic and policy climate, the social context in rural areas, systems knowledge, and information technology. For the private sector, however, it is the profit motive that drives the development of more independent, client-oriented, private extension services attuned to specific value chains of commercial interest. The development of a strong business relationship between the private sector and producers emphasizes the quality of interactions between service providers and clients, which contrasts with the traditional public extension model of moving "messages" through a hierarchical system (Adebayo 2004).

**12** According to the Uganda Investment Authority, the commercial opportunities in agriculture and agroprocessing are vast, ranging from the production of cut flowers for export to production and value addition in oilseeds, livestock, and cotton,<sup>28</sup> and in fact some agribusinesses have expanded rapidly in Uganda. In 2017, one-fifth of export earnings and one-third of foreign exchange earnings came from grains, sugarcane, cotton, tea and coffee.

28 See <http://www.ugandainvest.go.ug/priority-sectors/agriculture-agribusiness/>.

## 5.2 The Private Sector in Uganda

**13** The status of the private sector in Uganda is mixed. Private enterprises consist mainly of micro, small and medium enterprises. These mostly informal enterprises collectively account for over 90 percent of private sector production and employ over 2.5 million people. Only 14 percent of these businesses operate in the agriculture sector.<sup>29</sup>

**14** The private sector plays a major role in the Ugandan economy, even in the presence of typical bottlenecks and challenges, such as the disproportionately high cost of doing business. Uganda ranked 127 of 190 economies for ease of doing business in 2017.<sup>30</sup> Other constraining factors include the cost of starting a (formal) business and increased domestic borrowing, which crowds out the private sector by raising the cost of capital.

**15** Because of these challenges, Uganda's private sector is dominated by fewer than 30 large-scale firms, which control more than half of all manufacturing and processing.<sup>31</sup> Although leveraging private investment in agriculture is critical for Uganda to fully realize the transition to middle-income status expressed in the Vision 2040, private sector investment in agricultural value chains has not always flourished. It is especially challenging for private firms to invest in value chains dominated by small-scale producers with minimal resources, limited capacity, and little experience in commercial farming—precisely the farmers who need agricultural services the most.

29 fsdUganda (2015).

30 See <https://tradingeconomics.com/uganda/ease-of-doing-business>.

31 UNDP (2018).

32 NPCA CAADP Unit (2015).

## 5.3 Private Sector Approaches to Providing Agricultural Services

**16** Many countries and governments increasingly partner with agribusinesses to share financial risks and/or defray the costs of investments. The public sector has created enabling policy reforms, implemented regulatory reforms, and installed supportive infrastructure to allow the private sector to thrive. Enterprise surveys suggests that infrastructure constraints alone are responsible for as much as 58 percent of economic productivity constraints.<sup>32</sup> This finding is more telling for agribusiness, as infrastructure constraints erode profits on investment and constrict the space for firms to grow and expand. It is also worth noting that implementation of the public-private partnership (PPP) approach to agribusiness has been slow, despite its huge potential to link producers to opportunities for agroprocessing and value addition.

**17** It should be recalled that under NAADS, the provision of agricultural inputs and extension services was contracted to private service providers on terms and conditions that targeted specific services for specific commodity value chains. This PPP arrangement was hailed as an efficient means of delivering services only to those farmers who demanded them (although the challenge with this approach was the lack of supervisory monitoring to guarantee the quality of the goods and services provided). The idea was that this arrangement would create a demand-driven extension system that would minimize the cost of public financing to provide extension

services and related public goods.<sup>33</sup> The NAADS contractors are not considered in the analysis here, however, as they were simply paid by the public to offer a service to smallholders, and nothing else.

**18** Following the experience with NAADS, NAEF (2016) sought to reform the delivery of extension services by creating a more streamlined, inclusive, better coordinated, and decentralized "Single Spine" service delivery system. The Single Spine approach entailed the creation of a Directorate of Extension and Advisory Services, although free input distribution remains under OWC. As discussed in Chapter 3, because OWC focuses on procuring and distributing agricultural inputs and offers little in the way of knowledge transfer, it compounds the existential challenge of farmers who do not know how to use the technologies that are distributed, which limits technology adoption and potentially slows the transformation of agriculture and the agri-food system.

**19** There is a growing public perception that the intense interest of the current political establishment in retaining a stronghold in rural areas has caused OWC to appear to serve more of a political purpose than to act as an enabler of rural agricultural service delivery and socio-economic transformation. No policy framework guides the functions of OWC. The contradictions described in this review between the agriculture sector policy framework and implementation of OWC are yet to be fully evaluated. The specific manner in which OWC constrains private investment in agriculture needs to be analyzed, but it is obvious that OWC crowds out private participation in input marketing.

**20** Typically, the private sector offers agricultural services as means of securing the required volume and quality of supply through service delivery models that aim to improve value chain performance and value creation. For example, from a marketing perspective, firms train and advise suppliers to meet product quality standards in their target markets, and from an investment perspective, they subsidize the public sector through commodity sourcing, merchandising, and distribution; storage, primary processing, and other types of value addition; and supporting primary producers, the majority of whom are smallholder farmers. The private sector invests in farmers and their organizations as a means of aggregating products to reach economies of scale, and it may also provide production inputs of assured quality to maximize productivity, product quality, and uniformity. The specific services offered to producers by the private sector may range from training to enhance quality and productivity (for example, training in farm management practices and the use of agro-inputs), the provision of financial services (input credit, direct financial credit), and marketing services (bulking produce and providing access to the market). From the producer's point of view, agribusiness actors are filling a critical gap by setting up demonstrations to increase the adoption of new products, developing farmer outreach programs, and establishing contract farming and outgrower schemes. Although this suite of services appears entirely to serve the purposes of agribusiness, it nevertheless delivers benefits to farmers in the form of improved productivity; greater awareness of new products, technology, and innovations; better post-harvest management of agricultural output; and the development of a value chain of commercial interest.

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33 World Bank (2001).

## 5.4 Main Constraints Facing Agribusiness

**21** The challenges that private firms encounter in providing agricultural services to small-scale producers vary depending on the value chain and the area of engagement along the value chain—for example, they depend on whether the firms are involved as input and equipment suppliers, nucleus producers and processors, or marketers. In general, private provision of agricultural services in Uganda is characterized by asymmetry of information. For example, the lack of information on input use and technological advances prevents small-scale producers from using them. At the same time, limited access to input and output market information among smallholders creates opportunities for informal businesses, which are normally unregulated, to exploit producers.

**22** Other challenges for agribusiness include the high cost of finance, inadequate physical infrastructure, and poor farming techniques, which translate into low productivity, low revenue, limited access to markets, and low agroprocessing capacity. Only limited public financing and incentives are available to private agribusiness. The government has set up an Agricultural Credit Facility (ACF) in partnership with commercial banks, Uganda Development Bank Ltd., micro deposit taking institutions, and credit institutions. The Agricultural Credit Facility provides medium- and long-term loans for agricultural production and agroprocessing with a grace period of three years and an interest rate of less than 10 percent. Lending to the agriculture sector still remains stagnant, however, at about 7 percent of all private sector credit. The lack of financing and other incentives erodes profitability and prevents value chains from expanding to their full potential.

**23** The lack of defined standards for most agricultural commodities also restricts value chain development and marketing. In the absence of clearly understood standards, private firms find it challenging to do business with smallholders. For example, the farm-gate unit of measure for horticultural products varies from counts to crates to baskets, while at the retail stage products are measured either in counts or by weight. In addition, from the producer's perspective, pricing lacks transparency. This informality increases market penetration costs for agribusiness.

**24** Efforts to establish formal markets began with NAADS and continue with the government's current drive to revive cooperatives. Small-scale producers receive support to form producer associations (PAs) and/or farmer organizations (FOs), which can connect producers to formal national, regional, and international commodity markets. The PAs and FOs can also help producers to aggregate produce, negotiate farm-gate prices, and provide a link to agroprocessors for value addition. In other words, these rural institutions can increase transparency by facilitating access to market information—prices, quantities, and locations.

**25** The weak regulatory framework is particularly pernicious problem. Informal agro-dealers thrive in the unregulated market for inputs and equipment at the expense of formal businesses, and competition is stiff. The informal service providers offer inputs that appear to be perfect substitutes for those offered by formal firms, while targeting the same clients—small-scale producers. The inadequate enforcement of quality standards also encourages the dumping of low-quality agricultural inputs in Uganda with limited traceability. Formal firms normally meet the required standards and can impart some knowledge on how

to use them, but they can be pushed out of business by informal agro-dealers to the detriment of smallholders. When farmers stop using inputs because their quality is low, they resort to traditional production practices, which are not economically viable and cannot help them transition from subsistence to commercial farming.

**26** Many smallholder farmers remain underserved by the public extension system for reasons cited earlier: inadequate extension staff, corruption, inadequate central and local government funding, limited PPPs, and a top-down linear focus on service provision. Yet because private agro-input dealers and other service providers tend to operate in the highly productive agricultural regions where poverty is relatively lower, they also leave smallholders underserved, especially in areas such as the drier northeastern areas.

**27** The private sector can only meet smallholders' demand for extension services when it supports their commercial interests, and even then, the challenges can be significant. For instance, in the last three years Simlaw Seeds Company has spent over USh600 million on extension services in the agroecological zones where it operates.<sup>34</sup> Because the lack of quality market data and information is a constraint, the firm projects that its next budget will include over USh100 million for data acquisition. Nucleus estates and processors<sup>35</sup> also invest significantly in delivering agricultural services to outgrowers, but they encounter challenges such as side-selling by famers, limited access to financial services, and small land holdings.

Side-selling occurs when outgrowers do not adhere to their supply contracts with the nucleus estate and sell their produce in the open market to other buyers. Side-selling may occur despite significant investments by the nucleus estate to support increased production by smallholders and provide a guaranteed floor price. This practice is common among smallholders in sugarcane, coffee, and rice outgrower schemes, in which competition for produce among processors is intense.

**28** The challenge of enforcing supply chain contracts is serious for the viability of agribusiness. A typical example is Pearl Rice,<sup>36</sup> an indigenous company working with over 800 smallholder rice outgrowers in Busembatya, eastern Uganda. The company is involved in rice production, milling, packing, and marketing. It provides a range of agricultural services to small-scale rice farmers, ranging from tractor services, quality rice seed, and agronomic advisory services. In turn, Pearl Rice expects the farmers to sell their produce to its mill. When farmers decide to sell their rice to other buyers, Pearl Rice incurs losses that adversely affect its business performance.

**29** Limited access to rural financial services is another challenge for firms that elect to work with smallholders. According to FinScope,<sup>37</sup> only 10 percent of the people living in rural Uganda, where the majority of smallholders live, have access to formal financial services. Their limited access to finance prevents them from investing in new technologies to increase productivity and value addition. In the absence of functional rural financial markets, agribusinesses

34 Source: Ms. Syliva Nanteza Kyeyune, Country Manager, Simlaw Uganda.

35 Adopted from Technoserve (2011).

36 The author is grateful to Mr. Taseer Alwi for time and space accorded.

37 See <http://fsduganda.or.ug/finscope-2018-case-for-deeper-inclusive-financial-sector-uganda/>.

working with smallholders are compelled to provide credit, which adds to the cost of doing business and erodes profits.

**30** Finally, by definition, smallholders have little land, which presents another set of problems for agribusiness. Uganda's agricultural production systems are dominated by approximately 3 million geographically dispersed smallholder farmers cultivating about 0.8–1.6 hectares. These small farms are difficult to mechanize. Widely scattered small farms increase the cost of providing mechanization services and transporting produce to factories, which remains the biggest challenge for nucleus estates and processors.

## 5.5 Incentives for Attracting Private Investment in Agriculture

**31** The GoU acknowledges that the agriculture sector continues to play a critical role in the economy by creating jobs and wealth for its largely young population, and it slightly increased the budget allocation to the sector from USh832.42 billion in 2017/18 to USh892.9 billion in 2018/19.<sup>38</sup> As part of the initiative to promote private sector led growth, the government through the Uganda Investment Authority established a one-stop center to process applications for investment licenses and land acquisition documents, and it published a compendium of feasible agribusiness opportunities for potential investors to explore. As noted, the government established the Agricultural Credit Facility with an interest rate ceiling of 10 percent per annum, which is almost 50 percent less than current commercial bank rates. Plant and machinery for agriculture are exempt from import duty. The 18 percent value added tax (VAT) and the withholding tax (WHT) of 6 percent are

deferred if the cost of plant and machinery is above US\$22,500. Agricultural processing plants and equipment are also tax exempt if they meet certain conditions, including being destined for use by new entrants in the agroprocessing industry and for processing locally produced agricultural commodities for domestic consumption.

**32** Various agro-inputs are also tax exempt. They include all planting material certified by the relevant authorities as eligible to enter the country and all horticulture, floriculture, and aquaculture implements. The VAT for agrochemicals is zero-rated. These tax exemptions are temporary measures to kick-start investment and provide relief to struggling subsectors that face stiff competition from within the region.

**33** Some voices are calling for reversals in the tax regime in the agriculture sector, however, arguing that it would broaden the tax base and provide relief to overly taxed areas. For instance, Kasirye (2015) contends that termination of the VAT zero rating on processed milk could generate revenue in the range of USh19–22 billion. Also, removing the VAT exemption on maize, which is consumed by about one in every two households in Uganda, would generate about USh129–148 billion in additional tax revenue, but unlike the tax on milk, the burden of a tax on maize would be borne mostly by poorer households.

**34** Investments in large-scale farming increasingly draw accusations of land grabbing, facilitated by lacunae in the land law. The dual civil and traditional land tenure system also constrains private investments in large-scale farming, notably in the sugar subsector in northern Uganda and oil palm in Kalangala in the South. It is relatively easier to acquire land for agroprocessing because the land requirement is smaller.

<sup>38</sup> See <http://www.ugandainvest.go.ug/priority-sectors/agriculture-agribusiness/>.

## 5.6 Models Used by the Private Sector to Provide Agricultural Services

**35** The private sector has taken various approaches to engage farming communities in Uganda and provide agricultural services. The approaches differ in their degree of formality, the level of investment by private firms, the negotiating power of producers, and the underlying risks to both parties. The model of engagement that is chosen by a private firm will reflect the trade-off between increasing investment and increasing risks, such as market crowding and inconsistent supply of produce.

**36** Formal models are characterized by agreements between individual farmers (or through their associations and organizations) and private sector actors that usually aim to benefit both parties. Typically, a well-managed partnership provides farmers with secure access to markets (a guaranteed market and basic price); access to high-quality inputs, often provided on credit; access to extension and/or advisory services; reduced transaction costs; and improved cross-learning and exchanges. Private sector interventions also facilitate the participation of PAs and FOs in markets and reduce the costs of doing business along the value chain. The firms benefit from economies of scale in product acquisition and trade in inputs. Examples of formal engagement models include: (1) outgrowers schemes, (2) production contracts, (3) credit schemes and guarantees, and (4) farmer organizations and cooperatives.

**37** Outgrower schemes have been widely used in plantation agriculture, particularly in the sugar subsector. Farmers are contracted as outgrowers to supply sugarcane to processors. Farmers also receive extension services and inputs aimed at managing product quality and quantity. Where there

are many players, however, side-selling is a risk. Private firms often mitigate that risk by providing tractor services, cuttings cane at rates lower than the prevailing market rate and offering pre-harvest credit that is guaranteed by the projected value of the sugarcane. These mechanisms safeguard the firm's business interests to a large extent (see the case study on Kakira Sugar Works later in this chapter).

**38** Production contracts are agreements between producers and a private business to deliver products of a certain quality and quantity at an agreed price. These agreements are less structured than contracts for outgrower schemes. The private sector partner provides technical support to improve product quality but purchases only produce that meets the set standards. This approach has been used by seed traders who contract with farmers to produce and supply seed meeting their minimum requirements.

**39** Credit schemes and guarantees have been used by various private input stockists and distributors as well as producers (such as multipliers of certified seed). Given the risks, credit is usually provided to trusted farmers, stockists, and distributors who have a standing relationship with each other. Services offered to farmers range from training in how to use products to demonstrations of product performance. Some firms report giving a 30-day credit to farmers and FOs to develop and strengthen their professional relationship. The credit is part of the firms' marketing strategy and is not considered an extension service investment in their book of accounts.

**40** Farmer groups and cooperatives are the most common approach used by the private sector to engage with farmers. Working with farmer groups helps businesses obtain the required volumes and reduces transaction

costs. This approach has been used in more specialized value chains such as Arabica coffee (wet processing), cotton, and palm oil. These value chains require producers to use specific varieties of seed, high-quality fertilizers, agrochemicals, and specialized equipment to achieve the desired quantity and market quality. The private sector has been keen to invest in providing the required inputs and extension services to farmers engaged in the business. For instance, Fine Spinners Uganda Limited<sup>39</sup> offers farmers a range of cotton production services, from inputs (improved seed) and advice on improved agronomic practices to guaranteed purchase of the produce at premium farm-gate prices, which are slightly higher than prevailing market prices. The same model is applied by BIDCO under the Kalangala Oil Palm Growers Trust, which has over 1,800 outgrowers.

**41** **Informal models are less structured and have no binding terms and/or conditions governing the relationship between the private sector actors and farmers, PAs, or FOs.** The engagement is simply transactional, and the private actors deliver minimal services. Informal arrangements may include promotions and outreach or demonstrations, particularly by agro-input dealers seeking to increase awareness and purchases of new products and technologies. To achieve scale, farmers and PAs/FOs are targeted through their platforms, such as subcounty farmer forums, which are normally organized through the production officers in the local governments. This model is mainly preferred by agro-input dealers such as Simlaw Uganda.

**42** An intermediary model also exists, in which firms engage intermediaries who sign contracts with individual farmers or PAs/FOs that guarantee to purchase agreed quantities of their produce of acceptable quality. This model is very common in the Central Region value chains for Robusta coffee and vanilla. For vanilla producers, firms invest substantially in the delivery of extension services to farmers through third parties (intermediaries) to ensure the quality of the produce.

**43** Under the tripartite model of engagement, farmers or PAs/FOs, private firms, and third parties enter into contracts to deliver on various commitments. For example, the third parties may be providers of specialized services such as production inputs, financial services, and micro-insurance that are demanded by producers and have the potential to remove bottlenecks along the value chain. The aBi Trust used this model to promote agribusiness development to increase the productivity and competitiveness of various agricultural value chains. Both technical and financial support is extended to producers through third parties to support improvements, efficiency, effectiveness, and competitiveness in the preferred value chains, removing obstacles to the flow of produce from production to the final consumers.

**44** The models described here can be generally termed centralized models, in which firms directly engage farmers through some form of relationship in addition to providing extension and other agricultural services directly. In contrast, nucleus-estate models contract directly with outgrowers while also engaging in centralized production and processing on estates. This is the working model for large

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<sup>39</sup> See <http://www.finespinners.com/>.

firms engaged in large-scale production of industrial crops such as oil palm. The risk for producers with this model is that the firms may have a purchase monopoly and may be able to manipulate contract farmers who cannot find an alternative market for their produce. For example, Oil Palm Uganda Limited (OPUL), which operates in Kalangala district, is a monopoly, and its outgrowers are merely price takers.

### 5.6.1 Case Study 1: Private Sector Involvement In Providing Agricultural Services

#### Kakira Sugar Works

**45** Uganda is the largest producer of granular sugar in the EAC. According to the Uganda Sugar Manufacturers Association,<sup>40</sup> sugar production increased by 17 percent from about 365,452 tons in 2017 to 428,000 tons in 2018. In 2017, sugarcane production in Uganda was about 3.86 million tons, increasing from 1.67 million tons in 1968, growing at an average annual rate of 2.95 percent. Sugar production in Uganda was for many years dominated by three big manufacturers: Kakira Sugar Works (KSW), Kinyara Sugar Works Limited, and Sugar Corporation of Uganda Limited, accounting for about 82.3 percent of the national output in 2014 (Table 5.1). In November 2011, the government licensed several new sugar manufacturers<sup>41</sup> to reduce the deficits in domestic sugar production.

**Table 5.1. Annual output and market share of sugar manufacturers in Uganda**

Rank	Manufacturer	2014 output (metric tons)	Market share (%)
1	Kakira Sugar Works	180,000	41.06
2	Kinyara Sugar Works Ltd	120,360	27.45
3	Sugar Corporation of Uganda Ltd	73,500	16.77
4	Sugar and Allied Industries Ltd	29,500	6.73
5	Others	35,000	7.98
	<b>Total</b>	<b>438,400</b>	<b>100.00</b>

**46** The KSW is a subsidiary of the Madhvani Group of Companies, the largest conglomerate in Uganda. Madhvani Group's current turnover in Uganda exceeds US\$150 million per year, and its assets are valued at more than US\$300 million. The group also has investments in other EAC countries—Rwanda, South Sudan, and Tanzania. During the 1970s, the Madhvani family was expelled from Uganda. Their businesses were nationalized and mismanaged to near-extinction. In 1986, the family returned to Uganda, revived and rehabilitated their businesses, and started new ones. The flagship of Madhvani Group is KSW, which set up in the early 1940s but experienced a hiatus between the 1970s and 1986 due to political instability. Its annual sugar output increased from 90,000 metric tons in 2006 to 152,600 metric tons in 2010 and more than 180,000 metric tons in 2014. KSW crushes over 6,000 metric tons of cane per day and operates continuously for 10.5 months per year. The company grows sugarcane on a nucleus estate of about 10,000 hectares and supplements that production with cane sourced from 26,000 hectares owned by outgrowers. During 2006

<sup>40</sup> See <http://www.ugandaeconomy.com/trade-associations/uganda-sugar-manufacturer-s-association>.

<sup>41</sup> These include Amuru Sugar Works Limited, Atiak Sugar Factory, Bugiri Sugar Company, Buikwe Sugar Works Limited, Busia Sugar Limited, Hoima Sugar Limited, Kamuli Sugar Limited, Kyankwanzi Sugar Works Limited, Mayuge Sugar Industries Limited, Mukwano Sugar Factory, Ndiburungi Sugar Works Limited, Seven Star Sugar Limited, Sezibwa Sugar Limited, Sugar and Allied Industries Limited, and Uganda Farmers Crop Industries Limited.

to 2014 period the number of contracted outgrowers rose from 3,000 to over 7,500, who supply over 1 million metric tons of sugarcane, which is about 65 percent of the factory's annual requirement. Outgrowers normally own over 1 hectare and are located within a 25-kilometer radius of the factory.

**47** **The company maintains a sugarcane nursery for treated seed cane and a full-fledged agronomy section with an applied research center.** The research center conducts field trials and experiments on various aspects of sugarcane production, including herbicides, fertilizers, spacing, and varieties; it also analyzes the nutrient status of the crop and soils. In addition, the company has a laboratory and an agro-meteorological station that records all weather parameters for more effective planning of cane production both at the nucleus estate and on outgrowers' farms. The success of the company is reflected in the steady increase of cane supplied by outgrowers. KSW's expansion program foresees outgrower production increasing to over 1.7 million metric tons per annum. This growth will be achieved by increasing the area under cane production, increasing the productivity of current outgrowers, and registering new outgrowers. In the last decade, the company has invested over US\$80 million in a sugar complex in the northern Uganda.

**48** **KSW provides agricultural services and technical support to its outgrowers.** Services and support include the provision of seed cane and agrochemicals, advice on agronomic practices and techniques, use of farm machinery and equipment, and transport of the sugarcane to the factory. Although the costs of delivering these agricultural services are not available, they are likely to be substantial. Ultimately, the costs of delivering these "public goods" reduce the profits and competitiveness of

the company. The question is whether GoU should subsidize KSW to offset part of the costs of providing public goods.

**49** **KSW also contributes immensely to the Ugandan economy in terms of job creation, tax revenue, and environmental sustainability.** The company directly employs over 8,000 persons on the sugarcane estate and in the factory. Over 100,000 people depend on the company, and the community has seen not only jobs, but schools, hospitals, roads, and electricity arrive on the back of the sugar industry. The company generates about 22 megawatts of power from the bagasse, of which 12 megawatts is supplied to Uganda's national grid. The company also produces biofuels (ethanol) from molasses, which is used for blending petroleum products to reduce the dependence on fossil fuels.

### Oil Palm Uganda Limited

**50** **In 2002, OPUL signed an agreement with the government to invest in an integrated palm oil project in Kalangala District.** OPUL is a subsidiary company formed through a joint venture between Wilmar Group of Malaysia, Josovina Commodities of Singapore, and BIDCO Oil Refineries of Kenya. It is one of the largest direct foreign investments in Uganda. To date, the company's capital outlay has exceeded US\$150 million for an oil palm nucleus estate in Kalangala District and a processing factory in Jinja. The factory employs more than 1,200 workers, including workers from local communities. So far, about 10,000 hectares have been sourced for oil palm production in Buggala Island. The government has agreed to source 30,000 additional hectares for oil palm on the mainland, with 20,000 hectares for a nucleus estate and 10,000 hectares for outgrowers and smallholder farmers. OPUL has already established trees

on about 6,500 hectares. To meet its raw material requirement, OPUL is supporting over 1,800 smallholder outgrowers, who have planted over 3,500 hectares with oil palm. The outgrowers sell their produce to OPUL at a mutually agreed farm-gate price.

**51 OPUL is a beneficiary of the government's Vegetable Oil Development Project, which aims to expand local palm oil production as a substitute for imported edible oils worth over US\$75 million per year.** The Vegetable Oil Development Project is funded by the International Fund for Agricultural Development (IFAD), and its target is to plant over 40,000 hectares of oil palm in various districts of Uganda. OPUL's investments are driven partly by government incentives, including assistance in acquiring land to establish the nucleus estate, exemptions on import duty, and deferred VAT and WHT on factory and farm machinery and equipment. The GoU also provided tax incentives to establish a palm oil processing factory, a modern facility in Jinja that produces palm oil to international standards. The processing is environmentally-friendly, since biomass-powered boilers produce superheated steam that generates electricity through turbine generators. The lower pressure steam from the turbine is used to provide heat in the factory.

**52 OPUL provides agricultural services to outgrowers during the production season, including support to clear land; the provision of disease-free and high-yielding seedlings, as well as agrochemicals (fertilizers and pesticides) on credit; the provision of extension services; and the guarantee of a ready market for the produce at harvest.** An evaluation by IFAD finds that this arrangement has helped to establish trust between OPUL and smallholder outgrowers. The Kalangala Oil Palm Outgrowers Association currently owns 10 percent of the shares in OPUL. As a result,

the outgrowers' quality of life has immensely improved in the last decade. Oil palm trees have an economic life of about 28 years. They provide a sustainable alternative source of income to outgrowers and help to reduce pressure on the fisheries of Lake Victoria. OPUL also provides other economic services, including rural infrastructure such as feeder roads, electricity, clean and safer water, schools, and health centers. These services contribute significantly to economic transformation and poverty reduction in Kalangala District.

**53 The GoU will need to sustain the enabling policy environment to help OPUL roll out operations to other districts;** the government recently announced intentions to expand oil palm production to 10 new districts. Bugiri, Bundibugyo, Buvuma, Hoima, Iganga, Jinja, Kabarole, Kibaale, Masaka, and Masindi Districts have been identified as possible areas where oil palm can grow. In addition, a recent study indicates that oil palm could also grow in Amolatar, Bundibugyo, Dokolo, Mayuge, Mukono, and Oyam Districts.

#### **5.6.2 Case Study 2: Cooperative union involvement in providing agricultural services**

**54 Agriculture cooperative unions are quasi-private entities that provide agricultural services to their members.** According to the Uganda Cooperative Societies Act Cap 112, a cooperative union is an organization formed by primary cooperative societies to provide the primary societies with services that the individual primary societies cannot afford in economic terms. Following the liberalization of the agriculture sector in the mid-1980s, most of the major cooperative unions wound up their businesses, including Banyankole Kweterana Cooperative

Union, Bugisu Cooperative Union, Busoga Growers Cooperative Union, East Mengo Growers Cooperative Union, Masaka Growers Cooperative Union, South Bukedi Cooperative Union, and West Mengo Growers Cooperative Union. In the early 1990s the surviving cooperative unions were reorganized to function in the context of newly liberalized agricultural markets.

**55** Several strategies were used to revive the cooperative movement and help farmers adjust to the changing business environment of a liberalized market economy, including: (1) supporting cooperatives as independent business units; (2) building autonomous democratic institutions; (3) providing technical support to farmers to improve their productivity and profitability; (4) training cooperative union staff in best practices for operating agricultural cooperatives; and (5) providing policy guidelines for cooperative operations (Kwapong 2010).

**56** Accordingly, cooperative societies were reorganized as business entities with some form of self-generated revenue from commission charges, shareholdings, and membership fees. The cooperatives formerly sold their produce to commodity boards at fixed farm-gate prices, but the newly reorganized cooperative unions would negotiate prices, sell to the highest bidder on the open market, engage in diversified businesses, and promote value-addition. About 64 percent of households surveyed for the Uganda Cooperative Survey (2010) attributed improvements in their livelihoods to the cooperative movement, while over 90 percent of respondents reported increasing their incomes by more than 24 percent as members of cooperative societies.

Agricultural services offered by the cooperative unions include extension, education and training; bulking and marketing; farm input supply; and savings and credit schemes. Each type of service is briefly discussed below.

## Extension, Education, And Training

**57** Cooperative unions by their nature are supposed to provide value-added services to their members (the cooperative societies). The services include training in leadership and management for staff of cooperative societies; promoting autonomous and democratic entities; and providing members with technical services (extension services). Extension services can be provided through cooperative-hired technical staff or by linking members or PAs/FOs to the district production departments. The Uganda Cooperative Survey (2010) reveals that 89 percent of members surveyed reported having received some form of training, and 87 percent reported selling over 80 percent of their total marketed produce through the cooperative (Kwapong 2010). These findings demonstrate the increasing importance of cooperative unions in spurring growth in the productivity and profitability of smallholder agriculture in Uganda.

## Bulking And Marketing

**58** Cooperative unions have logistical capacity to aggregate produce from cooperative societies, store or transport the commodities, and undertake primary processing or value addition. These roles cannot be met by the primary societies or even smallholders, who lack the means to bulk, process, and deliver their output in the required quantity to national, regional, and international markets. This arrangement

helps to protect members of cooperative societies from exploitation by unscrupulous intermediaries as they lack bargaining power. Bulking and marketing arrangements can be formalized under various schemes, such as contract farming, outgrower schemes, warehouse receipts, and crop insurance.

**59** A notable example is the Bugisu Cooperative Union, which is owned by coffee farmers in Bugisu subregion, comprising the Bilambuli, Bududa, Manafwa, Mbale, Namusindwa, and Sironko Districts. This cooperative union has been in existence for over 60 years and has 277-member cooperative societies. The union's resilience and survival is attributed to the importance of the Arabica coffee market, over which the union has almost monopolistic control, despite the presence of other private sector actors in the region. The union trains farmers in the best agronomic practices for producing Arabica coffee and in post-harvest handling, especially wet processing. Wet processing entails many steps, and although costly, yields coffee of very high quality. To maintain its edge over competitors, the Bugisu Cooperative Union provides wet processing facilities to members as well as full market information.

## Farm Input Supply

**60** Cooperative unions operate at scale both in business terms and geographical coverage. Unions undertake aggregate purchase, storage, and distribution of farm inputs to member cooperative societies to take advantage of volume discounts and economies of scale. The cost of inputs for members of cooperative societies is lower than if they purchased the same inputs directly from commercial suppliers.

This practice has supported the segmentation of agro-input markets into customer groups that share similar interests and needs in locations where cooperative unions are fully functional.

## Savings And Credit Schemes

**61** Savings and credit services are often delivered together (bundled) to optimize their effectiveness, encourage the efficient use of money, and promote a culture of saving. For example, the Bugisu Cooperative Union retains part of the proceeds of its member cooperative societies as savings that earn interest income and can be borrowed by members as needed. Savings can also be used to leverage credit from commercial banks as well as crop insurance. Interest income can be distributed to members as dividends or recapitalized to increase the value proposition of the individual cooperative society.

## 5.7 Conclusions

**62** For agriculture to act as a key economic driver of Uganda's Vision 2040 and the transition to middle-income status, private sector investment must be leveraged. Agriculture by nature is a private sector activity, in which commercial firms are in the best position to understand market potential and to engage within their specific value chains. Moreover, Uganda's scarce public resources should be focused on those core public goods and services for which private financing is unlikely. A rigorous analysis will help to identify investments that generate largely public goods in which the private sector cannot invest, and investments that yield private goods that will attract private sector financing.

Public-private partnerships could be promoted in the case of relatively large investments.

- 63** At the same time, the constraints to private investment in agriculture are well known, particularly within those value chains in which small-scale producers can participate fully. For the private sector, the motive is obviously to facilitate business development and to earn a profit. Yet the large-scale agricultural services required for agribusiness development are costly, and the associated risks are too high to be mitigated by individual firms. The financial markets are equally hesitant to develop products for financing agriculture, which to a large extent has limited the operations of even relatively larger agribusinesses. Consequently, they have restricted their businesses to certain geographical areas and specific value chains. To further leverage private sector investment in agriculture, the government must implement policies that will help to reduce the cost of doing business, and it must also co-finance some of the services provided by agribusinesses to smallholders.





## **CONCLUSIONS AND RECOMMENDATIONS**

## 6.1 Public Expenditure on Agriculture: Level, Composition, and Efficiency

**1 Although the final share of public spending on the agriculture sector (PEAS) more than doubled in real terms between 2013/14 and 2016/17, the share of PEAS in total public expenditure (PE) remained low throughout the period, averaging 3.6 percent.** This share is also low compared to that of Uganda's East African neighbors (Kenya, Tanzania and Rwanda) and the Maputo/Malabo target of 10 percent. To justify an increase in budget allocation to move toward the 10 percent target (which is aspirational, as only a few African countries have achieved or are close to achieving it), MAAIF needs to first improve the quality and effectiveness of spending in the sector.

**2 An economic decomposition of public spending on agriculture in Uganda indicates that development expenditures dominate both budgeted and final PEAS.** Development and recurrent expenditures represented about 66 and 34 percent of budgeted PEAS, respectively. There were no significant differences between budgeted and final PEAS in terms of the relative sizes of the development (50 percent) and recurrent (25 percent) budgets. Given that budget execution rates are high (around 90 percent), this means about 15 percent of budgeted PEAS was not disbursed by MoFPED to the agriculture-related ministries and SAGAs.

**3 Although development expenditures averaged 66 percent, they were heavily oriented to non-wage recurrent expenditures rather than to capital expenditures.** As a result, too little was invested in irrigation, rural access roads, wholesale and livestock markets, and veterinary, sanitary, and phytosanitary laboratories and equipment, which are critical

for increasing agricultural productivity and building resilience to climate change risks. The low capital expenditure is reflected in the poor condition of rural infrastructure, which adversely affected farmers' productivity and access to input and output markets. Similarly, the underfunded regulatory functions (sanitary and phytosanitary services) impacted regional and international agricultural trade and ultimately poverty reduction efforts. MAAIF therefore needs to increase the share of capital expenditure in its development budget, which is essential for productive investments.

**4 Despite the government's focus on decentralization, the share of decentralized PEAS is low (7 percent in 2017/18, falling slightly short of the ASSP target of 10 percent).** Collectively, MAAIF, NAADS, NARO, and other SAGAs capture the bulk of the allocations in the sector (approximately 92 percent). The allocations to local governments declined from 37 percent in 2013/14 to about 7 percent in 2017/18, falling slightly short of the ASSP target of 10 percent. Given that local governments provide frontline agricultural services such as extension and advisory services, market information services, and rural infrastructure, their budget allocations need to be increased. A vicious circle appears to exist in which local governments/districts receive limited resources because of poor service delivery, and service delivery remains poor at the district level because of limited resources. MAAIF therefore should find ways to reduce its headquarters operating costs and retain a modest budget for the policy, strategy, and regulatory functions.

**5 The geographic distribution of PEAS shows high efficiency in addressing inequality.** Although the ASSP does not provide precise spatial targets, the geographic disaggregation of PEAS shows that spending favors the Northern Region.

This region is emerging from conflict, has much lower levels of human capital, is the least populous, and has poor infrastructure. Per capita PEAS is also persistently higher in the Northern Region but is relatively the same in the Western, Central and Eastern Regions. In 2006, approximately 68 percent of the poor lived in the Northern and Eastern Regions. By 2013, this proportion had increased to 84 percent. In 2016, about 47 percent of the poor lived in the Northern Region and another 37 percent in the Eastern Region. In the Northeastern Region almost three in four residents (74 percent) live below the national poverty line. The Northern and Eastern Regions would need targeted spending to address inequality, end extreme poverty, and boost shared prosperity.

**6 The complexity of the institutional setup and budget architecture contribute to technical inefficiencies in public spending on agriculture.** MAAIF has 12 departments operating under four directorates, and there are six SAGAs. Under the circumstances, MAAIF can hardly play an effective coordination role and take the lead in budget planning, implementation, and monitoring. This level of complexity prevents the smooth implementation of an agricultural transformation strategy that balances production support, training, research, infrastructure, storage, and marketing. The challenges induced by persistent centralization and poor capacity at the district level are well exemplified by the multiplicity of stakeholders (MAAIF, NAADS, OWC, and local governments) and issues surrounding input provision and extension.

**7 The analysis of the PEAS data across 2015/16–2017/18 reveals that OWC activities contribute to both allocative (economic and functional) and technical inefficiencies.** From 2015/16, input procurement expenditures started to dominate NAADS budgets, and extension services shifted to MAAIF. The budget for NAADS includes the allocation for OWC to procure and distribute free inputs, of which 96 percent is categorized as development expenditures instead of recurrent expenditures. The parliamentary report on implementation of OWC (Republic of Uganda 2017) argues that the introduction of OWC had several negative effects on the provision of inputs and extension services across the country, including a sharp decline in the number of extension agents at NAADS, the poor quality of inputs delivered by OWC, and the failure to deliver inputs on time or unreliability of private input suppliers. Whereas the focus was on NAADS over 2010–13, input distribution functions were transferred to OWC from 2015/16 onward, and in 2015/16 extension functions were transferred to MAAIF (the shift appears to be fully complete in the 2017/18 budget).

**8 In this context, the respective roles of MAAIF, NAADS, and OWC urgently require clarification.** Clear, well-defined roles are vital to a renewed strategy for sustainably providing input subsidies and extension services. A detailed budget breakdown for OWC is necessary to understand how the operation's introduction affected budget management and the provision of inputs and extension services. In addition, if the extension subfunction of PEAS falls chiefly on NAADS and MAAIF, the role of local governments and districts in supporting productivity improvements should be clearly determined.

**9** Donor funding plays an important and complementary role to national funding for agriculture (for instance, donors prioritize regions that are less well off). Although the share of donor funds (external resources) in PEAS has averaged 33 percent, there is no credible system of monitoring expenditures. Much of the donor portfolio in agriculture shifted from MoLG to MAAIF from 2015/16 on. This shift coincided with a significant increase in domestic resources for NAADS. In 2017/18, domestic sources of funds compensated for the decline in donor funding to MoLG. Complete information on actual spending of donor funds is not available for most years reviewed here. Data and information collection on external partners must improve to inform budget performance assessments during the fiscal year. The additional information could help to mitigate excessive “projectization” of PEAS, which is a challenge associated with donor-funded investments.

**10** A large proportion of PEAS (more than 40 percent in 2017/18) was used to finance private goods such as agricultural inputs or processing, marketing, and storage facilities. The increase in processing and marketing expenditures is not necessarily bad, provided they are used to attract private investments into the sector. But the large shares devoted to the distribution of free inputs at the expense of investments that would yield higher returns, such as research, rural/feeder roads, and irrigation, is worrying. MAAIF should contemplate a reallocation of PEAS toward subfunctions that serve to deliver public goods, such as feeder roads and irrigation, rather than private goods like inputs. Lastly, closure of the Agricultural Technology and Agribusiness Advisory Services Project, which provided 40 percent of agricultural research funding since 2015/16, prompts the need for renewed thinking on sustainable sources of finance for agricultural research.

**11** The policy and institutional landscape for agricultural expenditures in Uganda also needs to improve. The government’s outsized role in agriculture leaves little room for private sector participation. The government seems more enamored of transforming subsistence farming into modern, commercially oriented farming with the free distribution of inputs than with the exigencies of supporting policies that: (1) enhance the capacity of MAAIF to efficiently and effectively deliver on its mandates; (2) increase public investments in infrastructure (such as irrigation and rural roads); and (3) crowd in private sector investment in agribusiness, such as firms that market inputs and outputs and provide agricultural services (for instance, mechanization and financial services). Table A1.1 in Annex 1 summarizes the findings on policy coherence for selected PEAS indicators in Uganda. It compares PEAS indicators against national policy and ASSP targets as well as the Malabo/CAADP targets.

## 6.2 Institutional Environment and Barriers to Improving Public Expenditures on Agriculture in Uganda

**12** A review of the agricultural policy and institutional environment suggests that MAAIF’s role in developing policy for the sector has diminished over time. Some agriculture sector policies have emanated from NPA, an agency of MoFPED. The ASSP, which currently provides strategic direction to sector development, is not adhered to strictly. The links between the ASSP, the MTEF for agriculture, and the budget are not obvious. Although the agriculture SWG provides a platform for stakeholders to participate in the budget process and for monitoring execution, its effectiveness has been less than required. Finally, the roles and responsibilities of various MAAIF agencies in

budget planning and execution of budgets are unclear, let alone the interface between MAAIF and the local governments/districts in the budget process. These are some of the barriers to the improved efficiency and effectiveness of public expenditure that must be removed to enhance the delivery of agricultural services.

**13 Policy and institutional frameworks for agriculture are in place in Uganda, but as this analysis has shown, they are ineffective.** Public expenditures on agriculture are underperforming because of structural deficiencies and capacity constraints, but even so, MAAIF (and the ARUD program) have ample scope for improving the allocative efficiency of public resources to spur growth in the agriculture sector. To do so, MAAIF must continue with radical institutional reforms. The ministry's organizational structure should be reviewed to reflect its new roles, including its role in delivering extension services (transferred from NAADS). In addition, elevating the Planning Department to become the Directorate of Policy and Planning would strengthen its role and authority. A stronger framework is needed for incorporating local government plans and budgets into the ministry's annual work plans and budgets and for monitoring their implementation. The SWG should effectively provide technical guidance, oversee budget planning and execution, and monitor budget performance. To enhance the coordination of the ARUD program, U-PACT should be supported to get off the ground.

**14 Past reform initiatives were largely externally driven, particularly by MoFPED, MoLG, State House, and donors.** As a result, MAAIF's authority and leadership have been usurped by these ministries, departments, and agencies. The processes of initiating and managing reforms must be owned by the people who are going to

be most affected—MAAIF staff. Otherwise their lack of commitment to implement reforms will generate the negative energy that can eventually slow and even stop them. Reforms must aim at increasing the efficiency and effectiveness of delivering agricultural services to farmers. Finally, the existence of champions to articulate the rationale, significance, and outcomes of the reforms is a necessary condition. These champions must be internal and at senior leadership level. Several sources suggest that reforms without champions have limited chances of success. Below are eight recommendations on how to improve PEAS from an institutional point of view:

- **Ensure that limited resources are used as efficiently and effectively as possible.** MAAIF should identify, agree, and target the highest priorities.
- **MAAIF should ensure transparency, accountability, and participation in its service delivery** to maximize the efficiency and effectiveness of its expenditures. This action is in line with widely accepted principles of good governance.
- **Public expenditures should address the roots, not the results, of market failures.** Rather than spending the bulk of PEAS on free distribution of inputs, efforts should be directed toward creating incentives or an enabling environment for the private sector to participate in input markets, and toward strengthening the regulatory functions of MAAIF to ensure the quality of inputs.
- **Direct targeted input subsidies to producers who have the potential to transition from subsistence (producing for domestic consumption) to commercial farming (producing surplus for the market).** The current

provision of free inputs is fiscally unsustainable, creates dependency, and constrains efforts to crowd-in private sector investment in input distribution.

- **Improve the efficiency of project management to free MAAIF and local governments to focus on delivering their respective mandates.** Projects need to be consistent with the strategy and priorities for agricultural growth and development (ASSP and NDP II). However, a programmatic approach to sector development may reduce the number of projects, and the establishment of Single Project Implementation Units could reduce transaction costs.
- **Strategic improvements in public spending on agriculture must begin by making much greater use of the BFP and better use of the SWG.** Use the BFP as a tool to provide feedback to MoFPED and enforce the role of the SWG regarding technical assistance, oversight for planning and budgeting, and performance monitoring.
- **The MAAIF planning process must become much more credible and robust.** The ministry should have a Directorate of Planning with capacity, authority, and influence. Much greater attention needs to be paid to: (1) the criteria used for prioritization; (2) the expected outcomes; (3) detailed expenditure estimates; and (4) linking investment plans more closely to anticipated MTEF ceilings and indicating how plans would change if MTEF ceilings increase or decrease.
- **Much better impact evaluation is required to provide useful information about programs.** Once these evaluations are established, policy makers and planners will be in a better position

15

**There is an urgent need to balance allocations and increase the efficiency and effectiveness of spending on agriculture at the central and local government levels.**

Unavoidably, local governments should get a bigger share of PEAS than the current average of less than 10 percent. In the early years after decentralization, the consensus was that service delivery was improving. This optimism has now been muted by the challenges with district fragmentation, underfunding, and low capacity at the local government level. The quality of service has fallen across the board, even though the total number of people with ostensible access to some services may have grown. To reverse this negative trend in service delivery under local governments, the following measures should be implemented:

- **Strengthen local government capacity** for planning and budgeting, financial management, and procurement to improve the efficiency and effectiveness of spending, and most important, increase the quality and impact of agricultural services.
- **Develop a framework to engage citizens** in planning, budgeting, and performance evaluation to ensure transparency and accountability. Sustained improvements in service delivery depend, at least to some degree, on the ability of stakeholders to hold local governments accountable.
- **Shift procurement from the central to the district level** where possible to reduce transaction costs, minimize wastage and leakage, improve the quality of supervision, and empower the people of the district.

- **Discontinue the fragmentation of districts** (and if possible, consolidate to reduce administrative costs), and strengthen the governance and service delivery capacity of existing districts.
- **Explore other sources of local revenue for local governments** to fill the gap left behind by the abolished graduated tax.
- **Address the human resource capacity vacuum at the local government level** to ensure adequate staff numbers and skill sets for planning production interventions, implementing them, and monitoring and evaluating their performance.

### **6.3 Role of Private Sector in Providing Agricultural Services**

**16** Agribusinesses may invest in PAs/FOs as a means of ensuring that producers can provide a critical mass of the product they need to attain economies of scale. Or agribusinesses may provide other agricultural services to producers, such as seed and fertilizer, to maximize productivity and ensure product quality/uniformity. Such arrangements may be formalized under a contractfarmingarrangementorleftinformal. These arrangements place additional cash flow demands on agribusinesses (especially in the presence of credit market failures), place further demands on their balance sheets (for instance in securing credit for inputs from suppliers), and augment project risks. Some agribusinesses are willing and able to take on such expenditures, but others cannot, and therefore opportunities for smallholder farmers to participate in value chains are denied. Moreover, the propensity of agribusinesses to provide agricultural services to smallholder farmers is not scale neutral. The transaction costs involved often prohibit the participation of

smaller domestic agribusinesses and favor large multinational companies, which can bring in the necessary expertise and have the financial depth to engage.

### **17 The GoU needs to recognize the role of the private sector in providing agricultural services demanded by smallholders in value chains.**

For the private sector, the motive is obviously to facilitate business development and to earn a profit. Yet the large-scale agricultural services required for agribusiness development are costly, and the associated risks are too high to be mitigated by individual firms. The financial markets are equally hesitant to develop products for financing agriculture. This constraint to a large extent has limited the operations of even relatively larger agribusinesses. Consequently, they have restricted their businesses to certain geographical areas and specific value chains. To further leverage private sector investment in agriculture, the government needs to put in place policies that will help reduce the cost of doing business, and it needs to co-finance some of the services provided by agribusinesses to smallholders. Below are some of the policy reforms that are recommended:

- **Strengthen farmer organizations.** These organizations are important for integrating smallholders into agri-food value chains. Small-scale producers are numerous and geographically scattered, which increases the transaction costs of dealing with individual farmers. Through FOs, smallholders can gain access to knowledge and technologies and aggregate produce to achieve scale economies. FOs can provide links to agroprocessors for value addition to further increase farm incomes and reduce poverty. Federated FOs (such as cooperative societies and unions) can form productive alliances to commercially produce and supply agreed quantities

and quality of a specific commodity to a specific market. Under productive alliances, smallholders can also gain access to credit.

- Support vertical integration of FOs with larger producers and processors.**

To foster the competitiveness of Uganda's agri-food system and the economic inclusion and market power of smallholders, it is vital to integrate FOs in diverse value chains. Vertical integration of FOs into sustainable agri-food systems is important for smallholders to commercialize their production and access credit and markets; for larger producers (nucleus estates and agroprocessors), vertical integration enables value addition. By organizing production and facilitating quality grading through producer integration into processing firms, the challenges of branding can be overcome (Delgado 1999). The use of digital technologies can help to reduce asymmetries in market information and lower the transaction costs of dealing with large numbers of small-scale, widely dispersed farmers.

- Increase access to agricultural finance.**

Access to finance is critical for all parts of agri-food systems. Large farms and agroprocessors can potentially get loans from commercial banks, but financial institutions are often reluctant to lend to the agriculture sector, particularly smallholder farmers. To this end, savings and credit cooperative organizations and warehouse receipt systems are promising vehicles for fostering financial inclusion of smallholders and addressing the lack of collateralizable land titles for loans. Other options for smallholder financial inclusion are value-chain financing and smartphone-based financial technologies (FinTech). In the case of value-chain financing, formal contract farming

arrangements, vertically integrated operations, and outgrower schemes can provide input credit to farmers. This form of financing is increasingly used in Uganda for tea, sugar, coffee, dairy, barley, and sorghum (World Bank 2018c). Through smartphone-based FinTech, smallholders and financial institutions in rural areas can access a range of financial services, make mobile payments, receive remittances, or obtain higher prices for their produce because they have better access to market information. An example of FinTech is Smart Money, a savings and payment system operating in Tanzania and Uganda (AGRA 2017).

- Reform the public expenditure framework.**

Although there has been strong growth in spending on processing and marketing, PEAS has increasingly focused on the provision of input subsidies. A priority of the government should be to steer public investments in agriculture toward the provision of public goods, such as R&D, extension and advisory services, and rural infrastructure. Input and output marketing should be left in the hands of the private sector. The government should focus on regulating input quality and standards. In addition, it should fully implement extension reforms by allowing public goods and services for agriculture to be delivered by both public and non-state actors (including agribusinesses), and it should also directly offset/defray the costs to agribusiness of delivering those services through subsidies and PPP financing.

- Strengthen the policy and regulatory framework.**

A range of policy and institutional challenges need to be addressed, particularly those pertaining to input regulations and quality controls. The prevalence of low-quality inputs in

the market significantly reduces returns and technologies adoption rates. MAAIF needs to beef up its capacity to regulate the input market. Uganda has a Public Private Partnership Act (2015), which defines the role of the private party in a PPP. The PPP Act focuses mainly on infrastructure projects at the expense of service provision. There is an urgent need for the government to clarify the role of the private sector (agribusinesses) in providing agricultural services under PPP arrangements as well as contract farming.

- **Address land tenure issues.** Secure property rights over land are central for attracting private investment in agricultural development and commercialization. On the one hand, there is an urgent need to analyze how rising pressure on land is reducing the productivity of smallholder farming systems, diminishing prospects for expanding cultivated area. On the other hand, the land requirements for large-scale farming (agribusinesses) to expand also need to be addressed. Large-scale farmers depend on land markets to acquire property. Without secure tenure for smallholders, land markets are constrained, and land prices are likely to continue skyrocketing as demand outstrips supply.



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# **ANNEX**

# 01

## SUMMARY OF POLICY RECOMMENDATIONS

**Table A1.1. Policy coherence assessment for selected PEAS indicators**

Indicator	Observed	Target	Source of target	Gap	Recommendation
Level	3.6%	10%	Malabo (2014) Declarations, 2010 CAADP Compact, ASSP	-6%	Build up capacity to allow sector institutions to receive greater proportions of the national budget.
<b>Administrative efficiency</b>					
MAAIF and sub-branches	26%	41%	ASSP	-15%	Reconsider the role of NAADS in the sector's institutional framework and rebalance budgets accordingly.
NAADS	41%	23%	ASSP	17%	
NARO	11%	16%	ASSP	-5%	
Local governments	8%	12%	ASSP	-4%	Build up capacity at the decentralized level to increase district resources and gear up local service delivery.
<b>Technical efficiency</b>					
Execution rates	90%	No target, high value desirable			Maintain high execution rates but seek to increase the magnitude of PEAS.
Share of donor spending in PEAS	33%	No target, low value desirable	World Bank (2011)		Develop a strategy to phase out donor spending in the long run. Enhance expenditure monitoring systems for donor spending.
<b>Economic efficiency</b>					
Share of development spending in PEAS	66%	No target, high value desirable	World Bank (2011)		Refine classification systems of recurrent and development spending. Contemplate the reallocation of PEAS shares to long-term investments (capital spending).
<b>Functional efficiency</b>					
Share of PEAS allocated to specific commodities (including priority ones)	21%	53%	ASSP	-32%	Refine budget monitoring systems to better track and understand how PEAS interventions support specific commodities, including the priority commodities of the CBA.
Allocation of PEAS across commodity groups					Replenish livestock and fisheries, as well as food crops (even if they are poorly represented in the ASSP budget).
Livestock and dairy	20%	36%	ASSP	-16%	
Cash crops	41%	28%	ASSP	13%	
Crops, general	12%	3%	ASSP	9%	
Fisheries	6%	32%	ASSP	-26%	
Forestry	4%	NA	ASSP	NA	
Other	16%	NA	ASSP	NA	

Indicator	Observed	Target	Source of target	Gap	Recommendation
Allocation of PEAS across subfunctions					Replenish inspection for livestock. Envisage a gradual diminution of spending on producer subsidies to the benefit of irrigation or feeder roads.
Agricultural research	26%	15%	ASSP	11%	
Extension	12%	17%	ASSP	-5%	
Producer subsidies	28%	31%	ASSP	-3%	
Inspection	0%	10%	ASSP	-9%	
Irrigation	4%	5%	ASSP	-1%	
Other	9%	4%	ASSP	5%	
Processing, marketing and storage	18%	14%	ASSP	4%	
Training	3%	5%	ASSP	-2%	
Share of private sector-related functions (inputs, processing, marketing, and storage) in PEAS	30%	No target, low value desirable	World Bank (2011)		Design a strategy to crowd in private investment in the sector and increase spending shares on public goods such as irrigation and feeder roads.

# 02

## DATA SOURCES AND METHODOLOGY

**1** The analysis for this Uganda AgPER relied on data provided by MoFPED and drew on two sources:

- i. The MoFPED/World Bank BOOST public expenditure database, April 2018 version, which covers 2003/04–2016/17. For 2016/17, only budgeted amounts are available in the database.
- ii. IFMS budget data from MoFPED for 2016/17 (includes both budgeted amounts and expenditures) and 2017/18 (includes budgeted amounts only).

**2** These two data sources were combined to compute the PEAS indicators for 2013/14–2017/18. The combination of the BOOST and MoFPED datasets resulted in a single Excel raw data file containing about 127,000 lines of budget data. The analysis used 20 core variables extracted directly from the BOOST and MoFPED database.<sup>42</sup>

**3** Four more variables were constructed, as follows:

- i. **Scope:** a variable that specifies whether the expenditure line is considered as PEAS or not (included/excluded).
- ii. **Subfunction:** all expenditure lines that qualify as PEAS are mapped to a set of categories describing subfunctions, such as subsidies, research, extension, infrastructure, and so on.
- iii. **Subsector:** all expenditure lines that

qualify as PEAS are mapped to a set of subsector categories, namely livestock, cash crops, crops (general), forestry, and fisheries.

**iv. Commodity:** all expenditure lines that qualify as PEAS are mapped either to single commodities, commodity groups, or “all commodities.”

**4** Data gaps and implications are summarized in Table A2.1. Annex 2.

The most critical data gaps are: (1) the geographical mapping of expenditures in the data sources was not fit for the purposes of the analysis; and (2) no disaggregated expenditure data were available for Operation Wealth Creation (OWC).

**5** The analysis draws on an approach to reviewing PEAS that builds on previous work done by African governments in collaboration with the World Bank, the Food and Agriculture Organization (FAO), and the African Union (AU) (World Bank 2011; MAFAP 2015; AU 2015). This Annex outlines the approach followed to create the scope, subfunctional, sectoral, and commodity variables. The content of this Annex was adapted from the World Bank Agriculture Sector Expenditure Public Expenditure Review Methodological Note (World Bank 2018a).

42 The whole set of variables can be found in Uganda's BOOST database at [boost.worldbank.org/country/Uganda](http://boost.worldbank.org/country/Uganda).

**Table A2.1. Data gaps and implications for PEAS indicators**

Data gap	Implication for PEAS indicators	Significance for analytical results	Next steps
No data were available on actual expenditures in 2017/18 at the time of writing.	2017/18 figures in the report are budgeted expenditures.	Most recent budget behavior remains unobserved. Some recommendations may therefore already be endorsed.	Incorporate 2017/18 actuals when they become available.
No data were available on actual expenditures from external sources, except for 2016/17.	Analysis of external (donor) financing uses budgeted amounts.	The level of PEAS may be overestimated. Execution rates (economic efficiency) may be overestimated. The functional efficiency analysis is based on donors' planned behavior, not actual behavior.	Analyze donor finance matrices and off-budget expenditure tables in the budget books to see if missing actuals can be added.
Geographic disaggregation across regions was not available for 2017/18 figures.	Geographic analysis of PEAS does not include 2017/18 figures.	Most recent trends in the distribution of decentralized PEAS are not covered.	Liaise with MoFPED to update the geographical mapping in the BOOST database up to 2017/18.
Digital geographical mapping of subregions, and correspondence table of subregions to districts, were not available.	PEAS levels are known for subregions, but PEAS levels on associated districts are unknown.	The report does not contain maps of PEAS across districts.	Liaise with MoFPED and other agencies to obtain a mapping of subregions to districts.
No disaggregated data on OWC.	The level and composition of the OWC budget are unknown.	How inputs and extension services are provided to farmers, how provision of these inputs and services has evolved over time, the commodities that are prioritized, and how the introduction of OWC affected public financial management in agriculture remain unclear.	Liaise with MoFPED staff to obtain disaggregated budget data on OWC.

## Scope

**6 Four dimensions define the scope of PEAS covered in this analysis:** timeframe, functions and subfunctions, administrative units, and economic categories. Each is discussed in turn next.

disaggregation of local government expenditure across districts was available in the 2017/18 dataset. Even though no detailed analysis of district-level PEAS was done for this review, the lack of these data could constrain future studies on the decentralization of agricultural spending.

## Timeframe

**7 The analysis focuses on the 2013/14–2017/18 period.** Merging the BOOST database and MoFPED IFMS budget data for 2016/17 and 2017/18 created some challenges. For example, the coding system for expenditure items differed in the BOOST and IFMS datasets, which made the creation of the additional variables and classification particularly intricate. In addition, no

## Functions and Subfunctions

**08 According to the Government Finance Statistics manual of the International Monetary Fund (IMF),** a functional classification of expenses “provides information on the purpose for which an expense was incurred” (IMF 2014: 114). As such, agricultural expenditures are limited to those that support agriculture directly; in contrast, expenditures that support

agriculture indirectly (such as through positive externalities or long-term impact) are excluded.

**9** The set of functions considered in this analysis is consistent with the Classification of the Functions of Government (COFOG), an accounting system developed by the Organization for Economic Co-operation and Development (OECD) and the United Nations Statistics Division. COFOG classifies public expenditure by "functions or socioeconomic objectives that general government units aim to achieve" (IMF 2014: 142). The African Union Guidance Note (AUGN) on tracking and measuring the levels and quality of government expenditures for agriculture (AU 2015) recommends using the following COFOG categories to define "agricultural public expenditures": "agriculture (including livestock)" (70421), "forestry" (70422), "fishing

and hunting" (70423), and "agricultural research and development" (7084).

**10** Functions were disaggregated into subfunctions using the methodology for analysis of public expenditure on food and agriculture developed by FAO under its Monitoring and Analyzing Food and Agricultural Policies (MAFAP) program. This methodology proposes "COFOG-compatible" categories for subfunctions (MAFAP 2015). Some MAFAP categories, however, go beyond the scope of COFOG to include rural expenditures and expenditures in support of consumers. The analysis excluded the subfunction categories that were not COFOG-compatible. The final set of subfunction categories is shown in Table A2.2. Figure A2.1 is a visual representation of the functions and subfunctions included in the analysis.

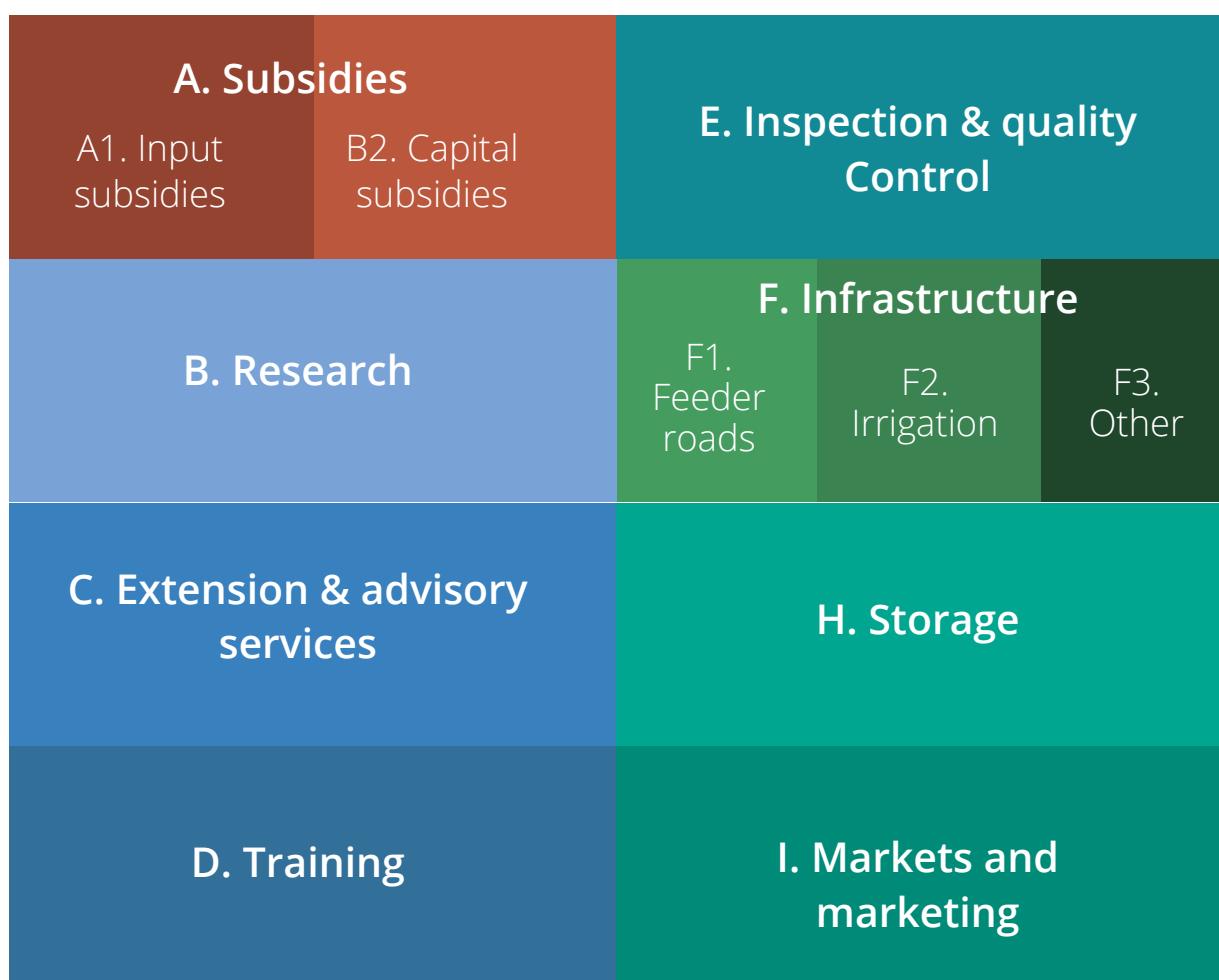
**Table A2.2. Subfunction perimeter for this AgPER, based on selected categories from the MAFAP methodology of FAO (covers COFOG categories 70421, 70422, 70423, 7084)**

Subfunction	Description
<b>A. Subsidies</b>	Transfers to private agents in the agriculture sector in the form of variable inputs or assets.
A1. Input subsidies	Transfers to private agents in the agriculture sector in the form of partial or total payment of seeds, fertilizers, pesticides, fuel, electricity, credit, and other similar items.
A2. Capital subsidies	Transfers to agents in the agriculture sector in the form of partial or total payment of agricultural equipment, machinery, on-farm infrastructure, livestock, and other similar items.
<b>B. Research</b>	Transfers to public or private agents in the form of partial or total payment of agricultural research activities.
<b>C. Extension &amp; advisory services</b>	Transfers to public or private agents in the form of partial or total payment of agricultural extension and advisory services.
D. Training	Transfers to public or private agents in the form of partial or total payment of training of agricultural private agents.
<b>E. Inspection and quality control</b>	Transfers to public or private agents in the form of partial or total payment of inspection and quality control activities: livestock vaccination campaigns, inspection of produce quality for marketing, and other similar activities.
<b>F. Agricultural infrastructure</b>	Transfers to public or private agents in the form of partial or total payment of the construction of infrastructure that directly supports the agriculture sector.
F1. Feeder roads	Transfers to public or private agents in the form of partial or total payment of the construction of roads that connect production areas to the market.
F2. Irrigation	Transfers to public or private agents in the form of partial or total payment of the construction of irrigation for agricultural production that is not on-farm (for on-farm, see A2): irrigation dams, canals, and other similar structures.

Subfunction	Description
F3. Other infrastructure	Transfers to public or private agents in the form of partial or total payment of the construction of other agricultural infrastructure that is not on-farm: for instance, wells to supply water to livestock.
<b>G. Storage</b>	Transfers to public or private agents in the form of partial or total payment of the construction of public or collectively owned storage infrastructure (for private ownership, see A2).
<b>H. Processing and marketing</b>	Transfers to public or private agents in the form of partial or total payment of the construction of collectively owned market and processing infrastructure (for private ownership, see A2), marketing or processing training, and other similar items or activities.
<b>Other – Administrative costs</b>	Transfers to public agents in the form of partial or total payment of the costs of maintaining efficient administrative functions in support of agriculture. This subfunction essentially includes salaries of staff in government agricultural agencies involved in managerial and secretarial functions and the maintenance/running costs of these agencies.

Source: Authors, based on MAFAP (2015).

**Figure A2.1. Perimeters of functions and subfunctions for this AgPER**



Note: Administrative costs are not displayed in the diagram but form another category of the perimeter.

**11** Although this scope corresponds to the COFOG coverage as described in the AUGN, it does not really match its “enhanced COFOG” coverage, which includes several additional categories that are deemed too broad for this analysis. Table A2.3 lists the “enhanced” COFOG categories, along with justifications for including them in this analysis or excluding them.

**Table A2.3. AUGN enhanced COFOG functions included in the scope of this AgPER**

AUGN enhanced COFOG function	Included in the scope of this analysis?	Justification
Food and nutrition security	No	There is no standard methodology to identify food and nutrition security expenditures, which can be far-reaching in scope, encompassing health and environment, food aid and humanitarian expenditures, and education, among others. Their inclusion risks skewing the indicators heavily.
Rural/feeder roads	Partially	Only identifiable feeder roads were included. Rural roads entail massive public expenditure items, which aim to support all sectors of the rural economy—health, education, resource extraction, and so on. Their inclusion risks skewing the indicators heavily.
Rural land administration	No	Rural land titling and administration have multiple institutional, social, and economic objectives and support agriculture only indirectly.
Sustainable natural resource management	Partially	Expenditures in direct support of the agriculture sector pertaining to sustainable natural resource management are included, such as agroecology, agro-forestry, and conservation agriculture. Other environmental expenditures are not included, as they support agriculture only indirectly and their inclusion risks skewing the indicators.
Multisectoral/multi-purpose projects	Yes	Whenever they include an agricultural component, these projects are considered.
Mandated functions of state-owned enterprises	Yes	Public funds that semi-autonomous government agencies (including state-owned enterprises) spend on agriculture are included.
Agricultural marketing	Yes	See category H of the scope defined in Table A2.2.
Capacity development for agriculture development	Yes	See category D of the scope defined in Table A2.2.
Rural electrification for agriculture	No	Rural electrification entails massive public expenditure items which aim to support all sectors of the rural economy—health, education, resource extraction, and so on. Their inclusion risks skewing the indicators heavily.
Information and communication technology (ICT) for agriculture	Yes	ICT for agriculture is included through other categories of the scope defined in Table A2.2 (B, C, D, E, H, mainly).
Subnational expenditures	Yes	PEAS that are implemented at the subnational level are included in the scope of this analysis.

*Source: Authors.*

**12** A two-step approach was used to extract data from the BOOST and MoFPED databases in a manner consistent with the scope defined earlier for functions and subfunctions: administrative selection/screening and keyword-based selection/screening.

**13** Administrative selection/screening automatically included all expenditures managed by the following agencies:

- 010 MAAIF.
- 157 National Forestry Authority.
- 306 Uganda Exports Promotion Board.

- The six semiautonomous government agencies (SAGAs): 152 NAADS, 142 NARO, 155 Cotton Development Organization (CDO), 160 Uganda Cotton Development Authority (UCDA), 121 Dairy Development Authority (DDA), and 125 National Animal Genetic Resource Centre and Data Bank (NAGRC&DB).

**14** **Keyword-based selection/screening** was used to capture relevant expenditures falling outside the agencies identified in the previous step. The screening was done by performing keyword searches in the datasets to identify agriculture-related lines. In addition, project lists were manually screened for all agencies (ministries and agencies) to identify agriculture-related projects.

## Administrative Units

**15** The analysis covered the following agencies:

- 003 Office of the Prime Minister (OPM).
- 010 MAAIF.
- 011 Ministry of Local Government (MoLG).
- 012 Ministry of Lands, Housing and Urban Development.
- 015 Ministry of Trade, Industry and Cooperatives.
- 019 Ministry of Water and Environment (MWE).
- 121 DDA.
- 125 NAGRC&DB.
- 142 NARO.
- 152 NAADS Secretariat.
- 155 CDO.
- 157 National Forestry Authority.

- 160 UCDA.
- 306 Uganda Export Promotion Board.
- All municipal councils and the Kampala City Authority.
- All districts.

## Economic Categories

**16** **The analysis of expenditures included the following economic categories:** all recurrent and development budgetary items, budgeted, released, and spent (expenditure), excluding debt service and including supplementary budget transfers. Revenue foregone is not included.

## Mapping Expenditures by Subfunction, Subsector, and Commodity

**17** Once the scope was defined, three additional variables were created (**subfunction, subsector, and commodity**), and expenditures were mapped to each variable. Expenditures were mapped to the subfunctions defined in Table A2.2 as follows:

- Isolation of lines included in the scope of work (about 127,000 lines were reduced to around 32,000 lines).
- Concatenation of agency, program, and project codes for lines included in the scope of work. Each line thus has a 12-digit code with three components, such as "010-010.00-0070," where "010" is MAAIF, "010.00" the program ("Development"), and 0070 the project (in this case, "AHRC-Ankole Ranch").
- Removal of duplicates in the list of concatenated codes (around 32,000 lines were reduced to about 750 lines).

- 18**
- Manual classification of the 750 remaining projects, either using project name or through internet searches and the review of project documents. The content of other core variables (such as "function," "MTEF," or "item") was also used to classify each budget line.
  - Many projects could not be mapped to a single subfunction, because they are multisectoral or multipurpose projects that implement a diverse set of activities. In those cases, multiple subfunctions were mapped to the expenditure line. After that, expenditure amounts were apportioned to each subfunction, assuming equal shares. Around 50 projects and 2,250 expenditure lines ended up being mapped to multiple categories and apportioned in this way. There were also cases in which projects were rejected from the perimeter following a closer examination of their content.

**18** The attribution of subfunctions also involved linking to subsectors and commodities for all expenditure lines included in the scope of work. The attribution used a simple list of five livestock single commodities and four cash crops. In addition to the "livestock" and "cash crop" sectors (for which disaggregation across single commodities was possible), expenditure lines were mapped to three other sectors: "crops, general," "fisheries," and "forestry." Expenditures were mapped to the "crops, general" sector when they could not be mapped to a single commodity, considering the information available. Thus, expenditures under "crops, general" include but are not limited to food crops.

- 19** The attribution process left subsector and commodity variables open for a large proportion of expenditure lines, because of information gaps or because expenditures target multiple sectors (such as expenditures on agricultural research or marketing). For example, for the 2017/18 fiscal year, 24 percent of budgeted PEAS could be mapped to identifiable subsectors, and the remainder targeted agriculture, forestry, and fisheries without distinguishing among them.

## Selection Of PEAS Indicators

- 20** The data available and choices regarding the scope of work and expenditure mapping drove, to some extent, the selection of indicators. Some efficiency indicators, for instance, that rely on subfunction, subsector, and commodity mapping are therefore based on calculated spending data.

**21** In this context, it is important to emphasize two points. First, the overlap between total expenditures for all national agencies included in the analysis and PEAS is almost complete, implying that the gap between the reported budgets and expenditures and the calculated PEAS is close to nil (See Table A2.4). Second, an exclusive focus on the figures reported in the budget books has its limitations. The recurrent/development distinctions in the books are of little help in differentiating between expenditures that fund institutional activities (administrative costs) and expenditures that fund activities that directly target economic agents in the agriculture sector. The salaries of extension workers or researchers, for example, may be recorded in the budget books as recurrent costs even though they result in services being provided to farmers. Moreover, assessing budget efficiency directly from the books is not straightforward, because it is

difficult to determine how much goes to each subfunction or commodity only by skimming through the project labels.

**22** In sum, this analysis seeks to add value to more descriptive accounts of budget trends in Uganda.<sup>43</sup> It should be read jointly with the main reporting documents published by MoFPED, such as the National Budget Framework Papers.

**Table A2.4. Administrative disaggregation of PEAS, final expenditure (USh billions)**

	2013/14		2014/15		2015/16		2016/17		2017/18†
<b>MAAIF</b>									
PE	68		92		76		160		331
Of which PEAS	68	(99%)	92	(100%)	76	(100%)	160	(100%)	331 (100%)
<b>NAADS</b>									
PE	72		156		184		318		280
Of which PEAS	72	(100%)	156	(100%)	184	(100%)	318	(100%)	280 (100%)
<b>NARO</b>									
PE	32		38		38		96		90
Of which PEAS	32	(100%)	38	(100%)	38	(100%)	96	(100%)	90 (100%)
<b>DDA</b>									
PE	5		4		4		7		7
Of which PEAS	5	(100%)	4	(100%)	4	(100%)	7	(100%)	7 (100%)
<b>NAGRC&amp;DB</b>									
PE	5		4		4		13		15
Of which PEAS	5	(100%)	4	(100%)	4	(100%)	13	(100%)	15 (100%)
<b>CDO</b>									
PE	3		12		10		9		9
Of which PEAS	3	(44%)	12	(91%)	10	(69%)	9	(33%)	9 (38%)
<b>UCDA</b>									
PE	8		7		43		85		77
Of which PEAS	8	(100%)	7	(100%)	43	(100%)	85	(100%)	77 (100%)
<b>National Forestry Authority</b>									
PE	11		7		24		16		30
Of which PEAS	1	(9%)	1	(12%)	5	(20%)	2	(14%)	8 (27%)
<b>Uganda Export Promotion Board</b>									
PE	0		0		0		3		3
Of which PEAS	0	(0%)	0	(0%)	0	(0%)	3	(100%)	3 (100%)
<b>MoLG</b>									
PE	35		31		45		154		282
Of which PEAS	15	(43%)	3	(9%)	20	(44%)	130	(84%)	245 (87%)
<b>MWE</b>									
PE	156		177		250		497		528
Of which PEAS	49	(31%)	53	(30%)	61	(25%)	87	(18%)	184 (35%)
<b>Districts, councils, other agencies</b>									
PE	2,071		2,308		928		2,781		3,047

43 Such as the descriptive approaches used in Kakuba (2016).

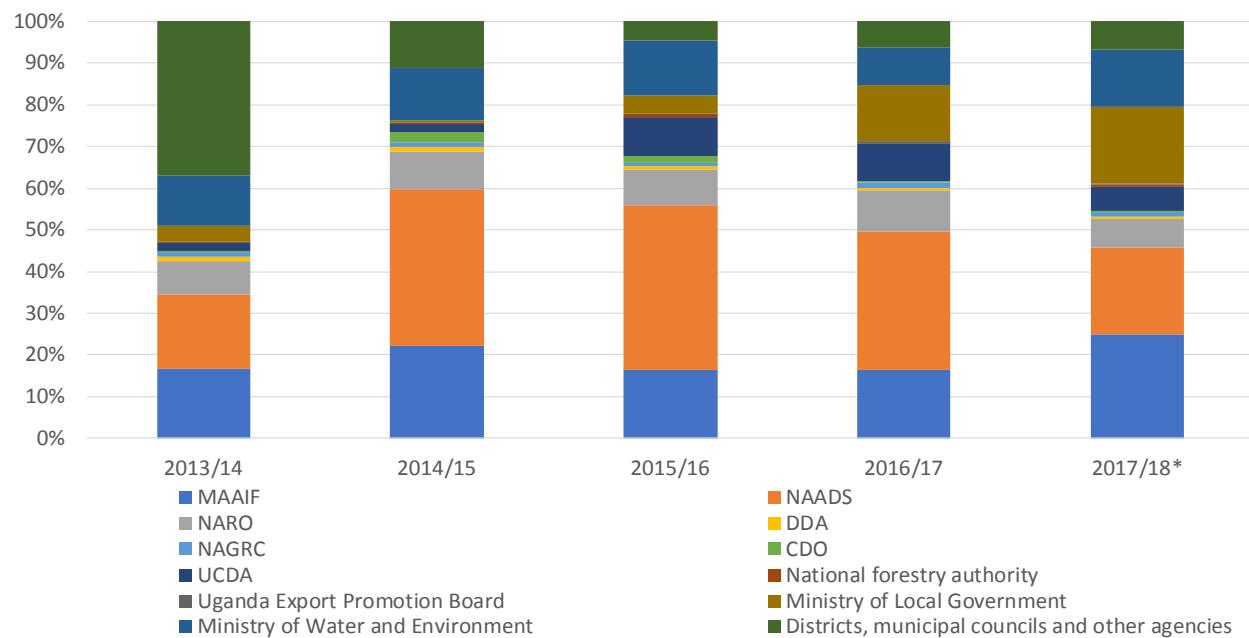
Of which PEAS	150	(7%)	46	(2%)	21	(2%)	61	(2%)	89	(3%)
<b>Total PEAS agencies</b>										
PE	2,467		2,837		1,606		4,138		4,698	
Of which PEAS	408	(16%)	417	(15%)	467	(29%)	971	(23%)	1,337	(28%)

Note: †2017/18 amounts are budgeted amounts, not final expenditure. Percentages in brackets are the shares of PEAS within PE. The "districts, councils, other agencies" item covers all districts and councils, the Kampala City Authority, the Office of the Prime Minister, and the Ministry of Trade, Industry and Cooperatives (see disaggregated list in "Administrative" section above). Ministries of "Lands, Housing and Urban Development" and "Lands, Water and Environment" were grouped together under "Ministry of Water and Environment" (MWE).

**03****LEVEL OF PUBLIC EXPENDITURE IN AGRICULTURE****Table A3.1. Reference budget allocations across agriculture sector agencies from the ASSP 2015/16–2019/20**

Agency	2015/16	2016/17	2017/18
MAAIF and sub-branches	149.2	293.5	326.7
MAAIF	138.8	264.5	295.4
MAAIF/COCTU	5.0	19.9	20.3
MAAIF DAES/NARO	5.5	9.0	11.1
SAGAs	260.3	282.1	290.1
NAADS	133.3	136.3	136.3
NARO	80.4	97.1	102.6
UCDA	33.2	33.4	34.6
DDA	4.8	6.4	6.6
CDO	4.5	4.8	6.0
NAGRC&DB	4.0	4.0	4.0
Local governments	30.4	95.0	100.0
Other agencies	23.2	86.7	121.3
Donor agencies	19.0	74.7	109.0
Fisheries Training Institute	0.5	2.0	2.2
Other	3.6	10.0	10.1
<b>Total</b>	<b>463.0</b>	<b>757.2</b>	<b>838.0</b>

*Note: Amounts computed by the authors using Annex D of the ASSP (MAAIF 2016). COCTU is the Coordinating Office for the Control of Trypanosomiasis in Uganda. DAES is the Directorate of Agricultural Extension Services.*

**Figure A3.1. Administrative composition of PEAS**

Note: \*Budgeted expenditures were used for 2017/18, not actuals.

**Table A3.2. Disaggregation of final PEAS across commodities**

	2013/14	2014/15	2015/16	2016/17	2017/18†
Livestock	5%	9%	3%	5%	6%
Beef	3%	8%	2%	4%	5%
Dairy	2%	1%	1%	1%	1%
Pigs	0%	0%	0%	0%	0%
Poultry	0%	0%	0%	0%	0%
Goats	0%	0%	0%	0%	0%
Cash crops	3%	5%	11%	10%	6%
Coffee	2%	2%	9%	9%	6%
Cotton	0%	3%	2%	0%	0%
Tea	1%	0%	0%	0%	0%
Other export crops	0%	0%	0%	0%	0%
Crops, general	2%	2%	2%	1%	5%
Fisheries	3%	2%	2%	1%	2%
Forestry	1%	1%	2%	0%	1%
Other	2%	4%	3%	5%	4%
General PEAS on agriculture and the rural sector	85%	77%	77%	78%	76%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: † For 2017/18, shares are for budgeted amounts.



Rwenzori House, 1 Lumumba Avenue  
P.O. Box 4463 Kampala - Uganda.

[www.worldbank.org](http://www.worldbank.org)