Strengthening Budgeting for Sustainable Development: Uganda's Transition from Output-Based Budgeting to Program-Based Budgeting

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PROJECT DATA

IMPLEMENTING AGENCY:
Ministry of Finance, Planning, and Economic Development, Uganda

COUNTRY:
Uganda

REGION:
East Africa

DEVELOPMENT CHALLENGE:
Improving budgeting

PROJECT DURATION:
2014–2018

DELIVERY CHALLENGES:
Human Resources and Organizational Capacity; Basic Infrastructure; Coordination and Engagement

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Executive Summary

The government of Uganda began transitioning from output-based budgeting to program-based budgeting in 2013 in a bid to improve the link between budgeting and national strategic objectives. Output-based budgets were developed to reflect the relationship between funding and expected outputs. The drawbacks of Uganda's output-based budgeting system included unclear alignment with national development plans, insecure and tedious manual processes, inadequate data access and security controls, and incompatibility with other government budgeting systems.

The program-based budgeting structure allocates resources by program or functional area, in alignment with the national development plan. Performance data inform decision making, either as a direct input in budget allocation or as contextual information for budget planning. The new program-based budgeting system is now online and can be accessed remotely. It provides user and security controls, can interface with other budgeting systems, and stores historical data for future use.

The rollout of the new program-based budgeting approach faced several delivery challenges, including inadequate infrastructure, as well as unstable internet and power connections, which administrators solved by using well-equipped regional centers. Capacity-building workshops for all system users run at regional centers and local governments helped resolve human resource challenges such as a mismatch in skills between the central and local governments. Nonetheless, some challenges remained unresolved, including poor internet connections and road networks that hindered access to remote areas.

The new system has led to better cooperation between the Ministry of Finance, Planning, and Economic Development and other agencies, ministries, and local governments that implement budget expenditures. Additionally, the automation of functions reduces the workload of users. The new system has also aligned budgets to national strategic objectives more closely and further improved budget estimates by providing checks that required the budgeting process to be completed sequentially.

Introduction

Beginning in the early 1990s, Uganda's Ministry of Finance, Planning, and Economic Development pursued financial management reforms meant to enhance the credibility of budgetary systems and reduce the diversion of public resources through embezzlement and misuse. Despite these positive steps, the need for high supplementary budgets, discrepancies between planned budgets and disbursed funds, poor accountability, and inadequate record keeping show that budget efficiency and effectiveness remain continuing challenges to development.

In 2008, Uganda began using output-based budgeting, which linked public expenditures to specific outputs such as the number of hospitals constructed, vehicles purchased, or kilometers of roadway built. The system's simplicity made it easy for public servants to use it for recording and monitoring expenditures and reporting financial statistics.

The output-based budgeting framework, though, had shortcomings. Measuring performance by outputs rather than results was not sufficient for achieving development targets, simply because outputs were not properly linked to specific development goals. Output-based performance indicators for Uganda's agricultural advisory services, for example, focused on the quantity of seedlings and fertilizer distributed to farmers instead of the quality and quantity of agricultural products. In the health sector, indicators focused on the number of health centers constructed rather than the quality of health services provided by those facilities. "Achievement of outputs on their own does not necessarily translate into the desired improvements in service delivery and achievement of the development goals and targets of the government," said Ishmael Magona, commissioner

of infrastructure and social services at the Ministry of Finance.

Furthermore, financial allocations in the output-based budget were not well linked to the national strategic objectives and priorities. Budgets at all levels of government must be aligned to national development plans if countries want to stay on track to achieve set development targets. In Uganda, central and local governments spent resources on low-priority projects that did not serve the strategic development objectives of the country. One government survey, for example, found that at the sector level, the annual budget for the 2015/16 financial year received a weighted alignment score (relative to the national development plan) of only 58.9 percent. This finding implied that only 58.9 percent of the designated targets would be achieved (Uganda National Planning Authority 2016).

Uganda's output-based budgeting process was time consuming, inefficient, and prone to errors. Each spending agency drafted its annual budget estimates using an offline Microsoft Office database called the Output Budgeting Tool. The Ministry of Finance manually consolidated those budgets (called *baby files*) into a detailed national budget. The system did not store historical budget data and suffered from security vulnerabilities. Baby files were transmitted on physical memory sticks that were easily lost or infected with computer viruses.

Furthermore, the output-based budgeting system was incompatible with other government systems, such as the Integrated Financial Management System (an electronic budgeting and accounting system that managed public spending, payment processing, budgeting, and reporting) and the Integrated Personnel Payroll Management System (a computerized human resource management information system). Data had to be manually transferred between those systems, resulting in a high risk of errors and data loss.

In 2013, the Ministry of Finance evaluated how the budget had performed within the new output-based budgeting framework and the output budgeting tool. The goal was to improve the country's budgeting system and structure to achieve the objectives of Vision 2040, a national strategy developed in 2007 by the National Planning Authority that seeks to transform the country into a modern and prosperous nation by 2040.

To strengthen the link between strategic objectives, budget allocations, and service-delivery outcomes for citizens, the Ministry of Finance adopted program-based

budgeting in 2013. The new structure aligned spending with national strategic objectives and provided a framework for monitoring the results and effect of public expenditures. It ran on a program-based budgeting system, allocating resources by program or functional area and aligning spending with program objectives and performance data to better inform budgetary priorities and spending plans (Uganda Ministry of Finance, Planning, and Economic Development 2018). The new structure allowed program results to be more easily assessed in relation to program outcome performance indicators and target objectives. A primary education program run by the Ministry of Education, for example, could be assessed by comparing annual primary school completion rates against set targets in medium- and long-term forecasts (Setym International 2017).

Budget planners expected that using short- and medium-term performance data to guide decision making and budget allocation in program-based budgeting would increase transparency and accountability throughout the budget process. The performance data would inform legislators, politicians, civil society, and the public of the intended purposes and anticipated results of public expenditures (Blazely 2018).

Delivery Challenges

Replacing output-based budgeting with program-based budgeting posed challenges related to human resources, organizational capacity, basic infrastructure (such as reliable roads and electricity), and interagency coordination.

Human Resources and Organizational Capacity

Information technology (IT) literacy gaps in some local and central governments delayed the budget process because some personnel were unable to use digital budgeting systems effectively. Understaffed departmental and local government offices also suffered from a shortage of technical skills and training.

In addition, accounting officers, such as the chief administrative officers and planners in local governments, feared that department heads in some local governments might face information overload. They believed that the presentation of too much information on budget reforms might make it difficult for department heads to understand and internalize the system.

Basic Infrastructure

Some local governments and regions lacked reliable electricity connections, internet access, and computers (see figure 1). Officials in such localities had to undertake time-consuming and expensive travel over long distances simply to access the program-based budgeting system, as it is accessible only over the internet. This problem further delayed budget preparation and implementation.

Adverse conditions of climate and geography also posed concerns. During the rainy season, a time when bridges are submerged and roads become slippery, some remote areas are difficult to access. These conditions impeded the user support team, which had to travel the country offering technical support to planning units and other local government departments.

Inter-Agency Coordination and Engagement

The Ministry of Finance and other stakeholders anticipated the challenge of setting "SMART" (specific, measurable, attainable, realistic, and time-bound) performance indicators in line with the national development plan and standard indicators framework. Such alignment would be crucial to achieving the government's long-term development targets. Finance officials feared that some government offices would have

FIGURE 1

Many remote government offices lacked electricity and internet access, such as this local government headquarters building in Rukiga District in southwestern Uganda.

difficulty distinguishing outputs from outcomes, a central concept of performance measurement. During the rollout of the new system, the ministry had to continuously improve engagement with different stakeholders to ensure a shared understanding.

Tracing the Implementation Process

Uganda's transition from output-based to program-based budgeting began with seeking stakeholder input and developing a program-based budgeting system. Once designed, the new system was rolled out to central government offices and then local government offices.

Engaging with Stakeholders

In 2013, the Ministry of Finance set up a special internal committee of officials to review the budgeting system and framework. In accordance with the recommendations for modernization in the committee's report, the ministry then scheduled consultative meetings with a number of national and international stakeholders. The ministry used the meetings to announce the transition away from output-based budgeting and to solicit views and feedback about a new system.

In March 2013, the budget committee met to discuss the ease of collecting data on outcomes rather than outputs with the Bureau of Statistics, which is responsible for national data collection, management, and dissemination. Subsequent meetings were held from 2013 to 2018 with the National Planning Authority and the Ministry of Local Government to discuss how to clearly define programs, program outcomes, and indicators.

The permanent secretary and secretary to the treasury at the Ministry of Finance led the policy-level discussion, in which he announced the findings of the internal evaluation committee to accounting officers from both the central and local governments. (These officers included chief administrative officers, permanent secretaries, and ambassadors of missions.)

The budget director led the technical-level discussion on proposed changes, which elicited feedback from international organizations such as the U.S. Department of the Treasury and the East Africa Regional Technical Assistance Center of the International Monetary Fund

(IMF), scholars and experts, professional bodies, civil society, key Ugandan ministries (such as the Ministry of Works and Transport), district planners and economists, and other departments and agencies.

The Ministry of Finance committee also met with elected leaders from local governments and members of parliament to share the new proposed budgeting system and structure. The proposed system was endorsed by the parliament through its committees of budget and finance, which supported a new structure clearly linking resource allocations to outcomes and national development goals.

The input received during the consultative process included suggestions for creating department-specific roles to increase the active involvement of all people in the budget formulation and implementation process, as well as introducing security controls to prevent unauthorized budget changes. These suggestions were incorporated into the new budgeting system.

The feedback helped the Ministry of Finance to clearly articulate required functions and features of the new budgeting system. Its core functions are budget planning (including preparing budget framework papers, ministerial policy statements, and budget estimates); approval of budget estimates and performance contracts; an execution interface that would make the program-based budgeting system compatible with other government systems; and quarterly reporting. In addition, the new system had to take steps to address the shortfalls of the previously used output budgeting tool.

Developing the Program-Based Budgeting System and Structure

Following the internal committee's recommendations, finance officials took benchmarking trips to countries reputed to have strong budgeting practices and systems, including Australia, New Zealand, Singapore, and South Africa. They asked finance officials from each country about the budgeting systems they used, how they functioned, and what enabled the systems to succeed. The team concluded both that no single budgeting system met all the requirements of Uganda's Ministry of Finance and that each country had a system customized to its own needs and conditions.

The Ministry of Finance, therefore, decided to hire a consultant to build a customized system, rather than a generic "off-the-shelf" system. The budget director chaired a meeting with IT consultants in early 2014 to

discuss this new development. According to Godwin Kakama, the commissioner of the Budget Policy and Evaluation Department at the Ministry of Finance, Uganda needed a system tailored to its own needs and priorities rather than those of other countries.

The customized system had to include features such as storage of historical budget data, secure log-in capability for individual users, compatibility with other public finance management systems, automated data-transfer capability, and remote accessibility.

Following an open-bid procurement process, the contract was awarded to Techno Brain group, India Office that specializes in developing customized software applications and innovative IT solutions across various sectors. Techno Brain built a sample system, which was not well received by the ministry. "It was clear that the consultants had not understood what the Ministry of Finance had requested, as they had not internalized the agreed-on business processes," said Carol Cindy, an IT consultant at the ministry.

To avoid further missteps, the ministry directed that Techno Brain work together with the ministry's IT team, which better understood the ministry's requirements. Because the Techno Brain team's location in India impeded coordination, the company established an onsite support center in Uganda in 2015. Ultimately, the company opened an office in the country to efficiently coordinate the system development.

Introducing Program-Based Budgeting

After the initial system development in 2016, the Ministry of Finance adopted the concept of program-based budgeting and encouraged different government offices with clearly defined roles to work hand-in-hand with the ministry to achieve given program outcomes. Budgeting focus shifted from outputs to outcomes in terms of services delivered. New budgets, for example, focused on the quality of health services provided rather than the number of hospitals constructed. This outcome would have a number of other contributing outputs such as the number of physicians employed and the availability of medical equipment.

In the same year, the Bureau of Statistics created a technical committee to guide its development of national standard indicators in collaboration with the finance ministry, the prime minister's office, and the National Planning Authority. The indicators measure budget performance against targets set by the national development plan. The committee's main objective was to develop a hierarchical national standard indicator framework that would cover national, sectoral, and service-level government operations. The indicators aligned the overall goals of central and local government agencies to the national development plan, the sustainable development goals, and the country's Vision 2040 program.

The program-based budgeting system uses a structure that links budget expenditures to program outcomes of central and local governments with objectives in line with the national development plan (Grizzle and Pettijohn 2002). Furthermore, the new structure clearly defined the reporting structure and hierarchy and shifted the focus of the results framework from outputs to outcomes.

Technical support from the U.S. Treasury Department and the IMF played an instrumental role in the development of the new system. A resident technical adviser on program-based budgeting was contracted from Treasury for three years to help in the process by providing technical guidance, developing a clear roadmap for the transition, and supporting the creation of the National Standard Indicators.

Defining Outcomes and Developing Outcome Indicators

From 2016, the Ministry of Finance, the prime minister's office, the National Planning Authority, the Bureau of Statistics, and representatives from all ministries held seminars and workshops to define outcomes and develop related indicators for various government offices responsible for implementing budget expenditures. During those workshops, the outputs and output indicators used under the existing output-based budgeting process were refined and streamlined to reflect SMART goal setting in line with the National Standard Indicators guidelines, the National Development Plan, and the Vision 2040 program.

The Ministry of Energy and Mineral Development, for example, had previously allocated money to buy electric wires and poles for distribution of hydroelectricity to villages. Under the new system, the ministry allocated money to the rural electrification program, which contained various outputs, including buying electric wires and poles. At the program level, funds were allocated to subprograms and activities whose outputs contributed to

FIGURE 2

A road section in Kanungu District in southwestern Uganda, which is prone to mudslides during the rainy season.

achieving program objectives. Program outcomes were aligned with national development objectives related to rural electrification, such as national targets for electricity access or reliability.

The main challenge at this stage was the lack of a shared understanding of the program-based budgeting structure, shown by the range of ways that local and national government offices defined their outcomes and outcome indicators. According to Beth Ansiimire, a senior economist in the Ministry of Local Government, a number of officials confused outcomes with outputs. Some of the indicators developed in the initial stages were not specific, measurable, or achievable, which made it hard to report on and measure performance. To get everyone on the same page and further refine the indicators, the Ministry of Finance continued holding seminars until 2018.

Launching the Program-Based Budgeting System and User Training

The program-based budgeting system launched on October 17, 2016. Its advantages included providing detailed, line-item tracking and reporting through the Integrated Information Management System; user controls and access credentials that restricted system users on the basis of their roles; and the protection of data security and remote access. Furthermore, the Ministry of Finance was able to remotely track real-time

system usage by all users to oversee submission of quarterly budget reports and other budget documents. The system also enabled the ministry to provide user support remotely (previously, users had to go to ministry headquarters for help).

In September 2016, the Ministry of Finance organized a program for holding regular, quarterly seminars to train local and central governments in using the program-based budgeting system. The first training recipients were selected from the best-performing district planners in local governments, prior to the system's rollout. These early adopters were considered "trainers of trainers" and began providing neighboring local governments with user support to those who needed it. These trainers were remunerated for their services, and they received special training before the exercise commenced.

Next, the quarterly training seminars for all users were carried out by both Ministry of Finance officers and trainers of trainers at regional centers and within local governments. Attendance was mandatory for all people involved in the budgeting process, including department heads.

Stuart Katungi, an IT consultant with the Ministry of Finance, said that the biggest challenge faced in capacity building and training was that some people in local governments had poor IT skills and a "phobia for computers." Furthermore, some local governments had very poor IT infrastructure, which delayed the training exercises. To address these challenges, the Ministry of Finance scheduled and allocated funds for capacity-building workshops for system users in ministries, departments, agencies, and local governments to teach users how to navigate the new budgeting system and structure, give hands-on training, and explain the new system's features and benefits.

Rolling Out the Program-Based Budgeting System

The system was first rolled out for use in the central government's budgeting process in October 2016. Budget

data for central government ministries, departments, and agencies for the 2016/17 financial year stored within the previous system was migrated to the program-based budgeting system and used to test-run the system to establish its efficiency in reporting budget performance. Central government offices subsequently used the data to report on budget performance and implementation in the same financial year and to draft budget framework papers for the 2017/18 financial year.

The central government got to try out the program-based budgeting system first because those offices had reliable electric power and internet connections and had larger, more computer-literate staffs. Technical challenges that arose during the first year of system use were easier to monitor and address than they would have been for local governments, which were more numerous and spread out.

Following the successful use of the program-based budgeting system in central government, the system was rolled out to all local governments beginning July 2017 to be used in the drafting of budget estimates for the 2018/19 financial year.

Trainers faced challenges such as poor IT infrastructure and internet connections and impassable road conditions during the rainy season (see figure 2). In response, the ministry adopted the use of integrated regional financial management system centers (regional IT centers) that were connected to the national IT network and had better internet connectivity in order to carry out training for affected local governments. These local governments used the same services to prepare their budgets, report on performance, and prepare work plans.

Outcomes

The new system led to better cooperation between (a) the Ministry of Finance and other ministries in the central government and (b) local governments responsible for implementing budget expenditures. This improved cooperation was reflected in the timely submission of performance reports and budgets and the improved alignment of budgets with national strategic objectives.

According to Ansiimire, the Ministry of Local Government senior economist, the automation of functions in the program-based budgeting system reduced the workload of users. Accounting officers no longer had to go in person to the Ministry of Finance to

submit or modify their budget estimates. The migration of decentralized budgeting down to the department level let department heads take responsibility for formulated budgets. They were eager to ensure that the formulated budgets were unaltered through the implementation process.

The program-based budgeting system enabled better data storage and management, reducing data corruption and loss compared to practice of using memory sticks for this purpose. The system allowed budget information such as allocation ceilings to be adjusted remotely, which saved time and improved information flow. Furthermore, the introduction of user access credentials improved both data security and management by recording user actions. This change made it easier to trace any unauthorized or unethical actions back to the responsible parties.

The system also improved budget estimates by providing checks that required the budgeting process to be completed in sequence. Users could no longer bypass steps or proceed from one stage to another without completing required tasks. For example, users could no longer allocate budgeted funds to individual expenditures without first allocating them to subprograms, outcomes, outputs, and activities. Such checks ensured compliance with all budgeting processes. Other checks prevented budget implementing agencies from spending on unbudgeted items, which stopped the diversion of budgetary resources away from intended uses, a rampant problem under output-based budgeting.

The ministry began developing further updates to the system to capture more high-priority functions, such as operationalizing the budget operations table and other key interfaces such as linkage to an aid management system that tracks funds from development partners.

Despite those improvements, challenges remained for users of the new program-based budgeting system. The system users continued to require training because of the large number of new employees resulting from internal transfers within both local and central government offices. Some local governments in remote areas still have unstable internet connections that require them to access the program-based budgeting system at regional training centers.

The system's focus on collaboration toward achieving shared outcomes posed potential accountability challenges, which sparked debates that were resolved only with great difficulty. In cases where more than two

spending agencies contributed to an output or outcome, some government officials questioned which spending agency had greater responsibility for implementation. Others raised concerns about being punished with budget cuts for not achieving a given target because of the poor performance of partner agencies. Additionally, some agencies hoped to assert their authority by highlighting their own role in program operations.

Lessons Learned

Stakeholder Involvement

Involving key stakeholders at every stage of the transition was critical in ensuring the success of budget reform. Cultivating such active involvement by officials at all levels of government reduced the potential for opposition against new reforms and the undermining of the effectiveness of the new programs. Godwin Kakama, the commissioner of the Budget Policy and Evaluation Department at the Ministry of Finance, said that "involving key stakeholders smoothed the transition process by reducing resistance, especially from politicians." Stakeholders were still involved in annual budget consultations carried out between September and December.

IT System Development versus Structure Development

During the transition process, more emphasis was put on the program-based budgeting system development than on the budgeting structure design, according to Moses Ssonko, an economist at the Ministry of Finance. The development of the IT system first forced the ministry to spend time and effort designing system updates whenever the program-based budgeting structure changed. The structure, Ssonko argued, should have been developed first before the the IT system so as to define desired functions such as the planning and reporting structures, the nature and volume of budget documents required, and the historical budget data that needed to be stored. Doing so would have clarified expectations for system development consultants and reduced the frequency of costly IT system upgrades.

The Importance of Pilot Testing

No pilot testing was carried out prior to full-scale rollout of the program-based budgeting system in central government spending agencies, and this created daunting challenges for the IT consultants in the system development's early stages. Finance officials and IT consultants suggested that in the future, a system test-run with a few spending agencies prior to its full-scale rollout would be wise. Carol Cindy, the IT consultant, said, "This can help identify technical and practical 'challenges' with the system, which are easier to handle with a few pilot users rather than on a full scale."

The Importance of Phased Reforms with a Roadmap and Clearly Defined Time Frames

Uganda's transition from output-based budgeting to program-based budgeting was gradually implemented in small but clearly defined stages. According to Doreen Sakwa, an IT consultant with the Ministry of Finance, this approach helped system users to appreciate and internalize system functions step by step so that new, as yet unlearned IT functions would not overwhelm them. It also gave implementing agencies time to understand the program-based budgeting system and structure.

In the transition period, the Ministry of Finance lacked a clear roadmap with defined expectations and timelines for key milestones, which delayed the implementation process at some stages and ultimately extended the transition period by more than a year.

Ultimately, some challenges remained in the budgeting process as of early 2020. Some local and central government officials had not yet fully grasped the concept of program-based budgeting. Lack of a reliable connection to the national IT network made it hard for some local governments to adopt the program-based budgeting system, since it is internet-based. The poor road system hindered capacity building in the form of local government training in remote areas. Staff attrition in central and local governments required periodic training of new users. Overall, however, Uganda took huge steps in improving its budgeting framework by transitioning from output-based budgeting to program-based budgeting.

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