

Policy brief

Gaps in the implementation of the e-voucher system in Zambia: Implications for strategies to make the model efficient and effective

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1. Context, justification and the problem

The Government of the Republic of Zambia (GRZ) has reformed the implementation of the Farmer Input Support Programme (FISP). The objective of FISP is to increase competitiveness in the agricultural sector among all key players (input suppliers, agro-dealers, banks, etc.), while improving farmers' welfare. The policy reforms are intended to ensure that FISP is more efficient, cost-effective and effective in supporting diversification and accelerating agriculture development (Ministry of Agriculture [MoA], 2016). Government's role will be oversight and monitoring, while the private sector will manage key FISP processes. Direct distribution of inputs by government involved a lengthy and bureaucratic tendering process that was very time-consuming, and often the inputs reached the beneficiaries late (Mangisoni *et al.* 2007).

As part of the reforms, FISP was migrated to 100% electronic voucher (e-voucher) across the country in the 2017/2018 agricultural season and the conventional method was discontinued. A centralised Zambia Integrated Agriculture Management Information System (ZIAMIS), a computerised web-based system, was implemented as the backbone mechanism for the management of FISP. The upgraded e-voucher modality integrated through ZIAMIS is hosted by the Electronic Government Division, the Smart Zambia Institute (SZI), with technical support from the Food and Agriculture Organization of the United Nations (FAO) and financial support from the European Union (EU). All systems for farmer registration, tendering, deposit collection and payments are integrated with ZIAMIS for real-time monitoring and government oversight. The centralised database is accessible at the national, provincial and district level by Ministry of Agriculture (MoA) officers, agro-dealers and input suppliers. It also has a set of applications to facilitate farmer registration and the redeeming of inputs at agro-dealer shops.

The ZIAMIS process involved the online registration of agrochemical, fertiliser, livestock services and seed companies as input suppliers. Upon registration, suppliers are provided with access credentials to submit their product list and recommended prices. Agro-dealers and beneficiary farmers are also registered. Agro-dealers supply the agricultural inputs to farmers based on quantities and prices agreed. The beneficiaries redeem inputs of their choice from approved agro-dealers using the ZIAMIS platform. The advantages of ZIAMIS include: (i) harmonised farmer registration, tagging and trucking of beneficiaries; (ii) due diligence in the identification of targeted beneficiaries; (iii) centralised/harmonised record keeping; (iv) real-time monitoring of quantity, price, suppliers and

tracking of beneficiaries' transactions; and (v) accountability and transparency of FISP transactions and segregation of responsibilities.

The current e-voucher system has the capability of identifying the type of inputs redeemed by farmers, making it possible to map the demand for various inputs. Notwithstanding these advantages, there are gaps relating to the implementation of the e-voucher FISP programme. The programme is besieged with numerous challenges that, if not addressed, can result in the decline of its contribution to national food production by farmers. This article contributes to the e-voucher FISP system to improve efficiency and effectiveness in input distribution.

2. Empirical literature

Most rural small farmers in Zambia use low purchased-input technologies, as a result produce low yields and face chronic food insecurity for two to five months per year. These households need programmes to increase their productivity and improve their food security (Mangisoni *et al.* 2007). As a result, many sub-Saharan African countries are now implementing farm input subsidies to stimulate farm-level fertiliser application, enhance food security, improve household income and alleviate poverty (Chibwana *et al.* 2012; Marennya *et al.* 2012).

The GRZ designed FISP in 2002 to improve input access by resource-poor smallholder farmers (MoA, 2016). The goal of FISP is to increase productivity to raise farm incomes and, ultimately, to reduce poverty and ensure food security. The heavy involvement of the GRZ in the procurement and distribution of input subsidies under the traditional mode of delivering FISP provided fertile grounds for corruption, rent seeking and racketeering, and stifled competitive private-sector participation in input marketing. The programme provided the same types of fertiliser across the different agro-ecological zones, which led to the inefficient use of fertiliser because it failed to recognise the variability in soil fertility and climatic conditions. Furthermore, the focus of this programme was mainly on maize, which restrained agricultural diversification.

Some studies have shown that subsidised inputs are disproportionately allocated to wealthier households (Jayne *et al.* 2011; Ricker-Gilbert *et al.* 2011), crowd out the private sector (World Bank 2010), and do not result in economically viable increases in production (Mason & Tembo 2015). Another concern with input subsidies is the extent of leakages and the diversion of subsidised inputs away from their intended use. Farmers are likely to apply inputs to the use from which they expect to get the greatest return. Input vouchers were therefore introduced to reduce transaction costs: beneficiaries are given a choice regarding the type and quantity available of any input, while the vouchers allow for the participation of the private sector, i.e. for market development at the local level (Mangisoni *et al.* 2007). It is against this backdrop that GRZ decided to expand the e-voucher FISP to all the districts throughout the country.

The e-voucher is specifically intended to: (i) ensure effective targeting of eligible beneficiary farmers, reduce leakages and increase the number of beneficiaries; (ii) crowd in more private-sector participation in agro-input distribution, thereby reducing public expenditure on the delivery of private goods such as fertiliser and seed; (iii) ensure timely delivery and collection of inputs by smallholder farmers; (iv) allow farmers to choose inputs of their choice, thereby promoting agricultural diversification; and (v) ensure better management reports, monitoring and oversight features for the ministry of agriculture (Kuteya *et al.* 2016; MoA 2016).

3. Method of analysis

The FISP is implemented by the MoA through the Programme Coordinating Office (PCO). The PCO works through both provincial and district structures, including Camp Agricultural Committees

(CACs), to create awareness of the FISP among all stakeholders. The district offices, through the agricultural assistants (AAs), are responsible for making farmers aware of the operation of the e-voucher system. Other implementing agents included are agro-dealers and input suppliers, who stock and supply agricultural, livestock, veterinary and fisheries inputs to farmers. Musika Development Initiatives, a company that works to stimulate private-sector investment in smallholder markets, was responsible for creating awareness and for the training of agro-dealers and input suppliers. The participating agro-dealers and input suppliers were selected through a national tender conducted in Lusaka by the MoA. The agro-dealers and input suppliers acquired point-of-sale (POS) machines through their own arrangements with banks. The banks facilitated the printing, distribution and activation of the e-voucher cards. The MoA district offices facilitate the updating of the farmer register through the field staff, distribute the cards to farmers, constantly monitor agro-dealers' operations and check on the farmers.

This study was carried out in the Northern Province of Zambia and included all eleven districts. The methodology was based on a combination of information obtained through interviews and discussions with officers from the MoA, including the district agricultural coordinators (DACOs), senior agricultural officers (SAOs), district marketing and development officers (DMDOs), AAs, farmers and approved agro-dealers. Interviews with farmers were done at the district MoA offices and during monitoring to get an overall view of the experiences and challenges of the implementation of the e-voucher FISP system. The use of this method afforded the researcher an opportunity to exploit the strengths of qualitative data. The design was the most suitable for addressing the challenges faced because of the type of data that was required. This helped to formulate strategies tailored to the specific implementation problems faced by the programme.

4. Principal results

This policy reform has helped improve the FISP programme in several respects, as follows:

- The ghost farmers were removed from the database of beneficiaries due to enhanced targeting through the ZIAMIS platform. This has reduced leakages and increased the number of intended beneficiaries by linking the e-cards to a particular farmer and their National Registration Card (NRC).
- Some farmers access various agricultural inputs simultaneously. The flexibility to purchase agricultural inputs beyond maize seed and fertiliser has helped farmers better meet their needs. Vouchers have also helped to shift small farmers' mindset to focusing attention on how to get as much value as possible from their vouchers.
- The e-voucher system has enabled farmers to access a wider range of inputs. Under the conventional FISP, the government distributed only seed and fertiliser but, in this case, farmers buy what they require. Those in livestock can purchase feed and fingerlings, while others can get farming implements.
- The number of agro-dealers participating in the provision of agricultural inputs from the local districts has increased. Agro-dealers have set up multiple shops in different districts and are able to stock more diverse inputs in their shops. Beneficiary farmers have access to a wider variety of inputs from a wider range of agro-dealers.
- The e-voucher system has promoted competition among agro-dealers and input suppliers, providing them an incentive to improve their services. This has led to flexible input pricing and timely distribution. It has made the input sector attractive to private investors, thus promoting private sector-led input distribution and marketing.
- The e-voucher FISP programme has reduced government expenditure by removing transportation and storage costs that were being previously incurred by government in fertiliser and seed distribution.

Despite the above successes, some common implementation problems were faced by the farmers, agro-dealers, banks and the MoA. These included the following:

- The farmer registration process started late. This led to some farmers, cooperatives and even camps being left out of the FISP. The centralised database required details about individual farmers and included biographical data, farming activities, contact details, etc. that met the set criteria and were entered once in ZIAMIS.
- The e-voucher FISP preparations started late. As a result, there was inadequate and incorrect information on FISP due to limited publicity and information dissemination. There was also late production and distribution of cards by the participating banks. Despite capturing data from the farmers, some beneficiary farmers did not receive their cards.
- There was limited ICT capacity among the agro-dealers. Due to limited time, some agro-dealers did not know how to operate the FISP e-voucher application and the electronic POS machines. Some agro-dealer POS or laptops with FISP e-voucher applications were also not functioning.
- There are limited internet facilities within the districts. The district MoA offices have been the first line of support for any challenges encountered. But the non-availability of internet facilities at the MoA offices delayed some of the processes, which included farmer uploads by the AAs and failure to produce the computer-generated authority to deposit (ATDs) lists by the district staff.
- The late payment of some farmers by the Food Reserve Agency (FRA) delayed the uploading of government funding to the system. A few farmers were unable to access inputs by mid-December because the FRA had not paid them.

5. Economic policy implications

The presence of implementation gaps established in the e-voucher system entails that trying to improve efficiency and effectiveness without addressing their causes may not yield the desired outcomes. It is therefore in the interest of policy makers and stakeholders to implement the following measures to improve the efficiency and effectiveness of FISP and promote private sector development:

- GRZ should start the FISP preparations early so as to achieve timeliness and allow for a longer transactions window for farmers. In addition, the Programme Coordinating Office (PCO) needs to improve the timing of budget releases for FISP activities. Districts should receive funds early in the coming season to allow for farmer registration and sensitisation. Funds are also needed for the early production of e-voucher cards by banks for farmers without cards. Districts should be given enough time to tag beneficiaries for next season.
- Effective implementation of FISP requires that all potential beneficiaries be fully informed of its modalities and how it will be implemented. This is crucial in ensuring that no other interests, including political factors, override the programme. The PCO should outline the e-FISP from farmer deposit to the collection of inputs. Implementation manuals should be developed for all stakeholders. More farmer awareness and information sharing must be done at the level of farmer cooperatives and associations through radio, TV and print media, and this must not be left to the MOA officers only.
- There is a need for e-voucher cards to be printed and delivered on time. Since the cards are protected by a PIN number, the beneficiary should inform the local banks when they are lost or stolen so that the card can be stopped and a replacement issued to avoid delays in resetting pins and replacing cards. Farmers need not wait months to have their e-card PIN code or card replacement problem resolved. Card production should be done through the farmer register in ZIAMIS to prevent misspelled names and incorrect NRCs being printed on the e-voucher cards.

- There is a need to decentralise some activities for approved agro-dealers, such as gadget registration on the ZIAMIS system to avoid late redemption of agricultural inputs by farmers. There is also a need for improved agro-dealer support, especially with regard to their adherence to the set code of conduct, redeeming process and business development. In addition, most agro-dealers and some MoA officers require some ICT upgrades and training.
- As a long-term measure, the FRA stock should be procured and stored on behalf of the GRZ by the private sector through the commodity exchange and warehouse receipts system to enable farmers to be paid on time (IAPRI 2017).

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