

Towards an Understanding of the Implementation of the Farmer Input Support Programme Electronic Voucher in Choma District, Zambia

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Abstract

The realization that agriculture input subsidies at times do not reach targeted communities has pushed many governments to consider ways of cutting subsidy costs, improve targeting of poorer households and eventual withdrawal from subsidizing agriculture. Against this background in the year 2015 Zambia adopted an e-voucher system as way to bolster FISP. This study focused on the implementation of the pilot e-voucher in Choma District in the Southern Province of Zambia. A qualitative approach was used to gather data from farmers, banks, farmer representative organizations and other key stakeholders. This study focused on key aspects of e-voucher implementation, such as beneficiary targeting, stakeholders' roles, input distribution and redeeming processes. The study noted that e-voucher system ushered in some benefits such as increased transparency, reduction of ghost farmers, rural employment creation, increased input accessibility for farmers and lowered the government's administrative costs on inputs delivery. On the other hand, the implementation of the e-voucher faced some challenges such as bank system breakdown, abuse of the facility as farmers purchased food items and other non-agricultural inputs such as iron sheets that are not covered by the subsidy and delays in e-voucher activation by the contracted banks. Going forward this study recommends more policing of agro dealers and early disbursement of funds by the government.

Keywords: e-voucher; implementation; input subsidy; smallholder farmers; FISP; Zambia

Introduction

In recent times, food and fertilizer hikes have increased farmers' vulnerability to poverty and food insecurity (Dorward et al., 2008). Given this background, it has become imperative for governments to provide input subsidies in an attempt to increase crop productivity and alleviate poverty. Much of the subsidy programs rose against the backdrop of the Abuja Declaration (AU, 2006) that emphasizes the need to improve access to fertilizer, focusing on targeted input supply to benefit the poorest. In the year 2012, 10 African countries spent 28.6% of their budget on inputs (Jayne and Rashid, 2013). Subsidies have become handy in recent times because they facilitate income transfers from the state to the poor farmers, albeit yielding very low economic and fiscal returns to government investments (Dorward and Chirwa, 2011). At the onset subsidies were provided in the form of a paper voucher, however this procedure was associated with a number of challenges such as counterfeited vouchers, high staff costs, collusion between government officials, villagers and agro dealers resulting in farmers exchanging vouchers for cash (Maso, Jayne and Mofya-Mukuka, 2013; Alloyce, Gabagambi and Hella, 2014). It is against this background that the e-voucher system was developed, the objectives still remained somehow the same with those of the paper voucher system, achievement of food security, increase farmers' incomes and poverty reduction (Maso, Jayne and Mofya-Mukuka, 2013). Above all, there is no doubt that subsidies can increase food crop yield but this depends largely on the design and implementation of the subsidy program (Kato, 2016). To this end, this study attempts to explore the implementation of the e-voucher in Zambia, with focus on how was the e-voucher implemented, what challenges were encountered, what benefits were realized and more importantly how the drawbacks noted can be ameliorated. This study focuses on implementation of the e-voucher, for it is implementation that translates policy goals and objectives into practices that are directed at improving the lives of the society (DeGroff and Cargo, 2009).

Zambia input subsidy in context

Zambian government Fertilizer Support Programme¹ (FSP) to farmers started in the year 2002 and it was renamed Farmer Input Support Programme (FISP) in 2009 (Kato, 2016). Under this scheme the government provides a subsidy equivalent to 75% of the cost of the inputs to smallholder farmers. The scheme benefits farmers who cultivate 1-5ha of land. Having noted the weakness of the paper voucher under FISP, the government introduced the E-voucher system under FISP in the year 2015. The purpose of the e-voucher was to increase targeting of poorest households and this was inline with the current trendy of smart subsidies that are acknowledged for being more sustainable and with few leakages (Maso, Jayne and Mofya-Mukuka, 2013). The

¹ FSP, covered fertilizer and maize seed only

use of the e-voucher in input distribution was highly recommended to the government by various stakeholders as one major strategy to address the shortcomings associated with traditional FISP (GRZ, 2015). Furthermore, the distribution of farming inputs to beneficiaries through the e vouchers has the capacity to reduce both medium and long-term administrative costs, enhance efficiency in input distribution and beneficiary targeting (ibid).

E –Voucher Implementation

The e –voucher system involves the inclusion of private players in the distribution of inputs. The rationale behind this is that the market works better in sharing of information with the public (WFP, 2014). A voucher is a coupon that is issued to a customer with a determined value; it can be used in participating locations. An e-voucher is an advanced voucher system and used in conjunction with an electronic system, recording and tracking transmission (ibid). In addition there are also mobile vouchers that are a combination of an electronic system and mobile phones, the mobile phones are used to receive and redeem e-vouchers.

In some cases, in the distribution networks e-voucher programs make use of rural retail shops as the distribution networks. Studies have shown that villagers prefer inputs stockist close to their villages (Alloyce, Gabagambi and Hella, 2014). In addition, e voucher has become one of the most preferred modes for inputs subsidy programs because the e-voucher crowds in the private sector, this may increase farmers' access and lower inputs diversion (Maso, Jayne and Mofya-Mukuka, 2013). The key idea for private sector involvement is to limit government's involvement and stimulate demand for commercial fertilizer (Kijima, 2016). In an e voucher system, agro dealers are trained by the government or by any other appropriate stakeholder (Gregory, 2006). The agro dealers participate on an agreed margin basis (Elijah, 2017). It is also argued that in reality the purpose of e –vouchers like any other smart subsidy is to address access not availability (ibid).

Before the e voucher is sent to beneficiaries, a registration process is done and information collected usually includes national ID, name, mobile number and input requirements (Elijah, 2017). In some countries such as Rwanda, bank staff register and train farmers on how to use the electronic platform (ibid). Nigeria implemented the E – wallet under GESS¹, the scheme targeted the most vulnerable households, aimed at increasing agriculture information dissemination and input supply (Fadairo, Oluteggbe and Tijani, 2015).

The key aspects of an e –voucher system is that it must be hinged on; innovation, adaptation, scale and performance indicators (Dorward and Chirwa, 2011). An e-voucher system must introduce new security features, improve the scale of inputs access and there must be ways or methodologies for measuring implementation of the e-voucher. There are several tasks involved in the implementation of the e-voucher, some key ones include; beneficiary identification, farmer registration, coupon security, input security, input distribution, coupon redistribution, coordination and control (SOAS, 2008; Dorward and Chirwa, 2011). In evaluating subsidy implementation focus must be on cost, modalities, timing, targeting, rationing of input access (SOAS, 2008 cited in Dorward and Chirwa, 2011). Rationing is a result of resource constraints; as such governments specify the quantities of inputs per beneficiary (Chirwa and Dorward, 2013).

The success of a subsidy program is also hinged on the provision of complementary investments (Dorward and Chirwa, 2011; Nalwimba, Qi and Mudimu, 2017). Complimentary investments include improvements in infrastructure and market access. Subsidy targeting can have many aspects such as –geographical and categorical (Kato, 2016). The former refers to a specific location and the later refers to the provision to a specific group of beneficiaries for example small-scale farmers or female farmers. Additionally, there could be intra community targeting such as between different categories of people or households (Chirwa and Dorward, 2013).

E-voucher is beneficial for instance Kijima (2016) argues that in Nigeria there was improved transparency and accountability in the inputs distribution scheme. Furthermore, farmer awareness of the GESS program rose from 45-75% in the first year. Similarly in other studies farmers' access to inputs increased by 80% (Abedo, 2014). On the other hand, there are challenges associated with e-voucher such as agro dealers incapacity to restock, no means of verifying if one is a genuine farmer or not, unclear procedures, late payment leading to closure of agro dealers, need for more government support staff for registration and political pressures especially use of input programs for patronage and at times fails to pay attention to gender issues (Dorward and Chirwa, 2011;Fadairo, Oluteggbe and Tijani, 2015; Kijima, 2016; Abedo2014; Xu et.al, 2009 cited in Jayne and Rashid, 2013; Kato, 2016).

Data and methods

Description of the Study Area

Choma District is located in the central part of Southern Province with an area of 7, 249 square kilometers and a total number of 57, 513 farming households, 91 % of which are smallholder farmers(Ministry of Agriculture Choma District Annual Report, 2017). Crop and livestock farming constitute the main economic activities in this district. Other forms of economic activities such as commerce and trade are centered on a thriving agricultural

¹ Growth Enhancement Support Scheme(an agricultural input support program)

sector in the district. The main crops grown in this district are maize, cotton, sweet potatoes, tobacco and groundnuts. Cattle assume an important role in the social- economic aspects of the people. Choma district is divided into five Agricultural Blocks that are manned by Block Extension Officers. The agricultural blocks include Mapanza, Batoka, Singani, State land and Mbabala. The blocks are further divided into 27 Agricultural Camps that are manned by Camp Extension Officers. All the agricultural blocks and agricultural camps have Extension Officers.

Research Methods

A qualitative research approach was used in the data collection and analysis. Both secondary and primary sources of data collection were used. Primary data was collected from various stakeholders who included 12 Agro dealers, 2 banks, 3 officers from the District Agricultural Coordinating Office, 7 Camp Extension Officers, 5 Block Extension Officers, 10 Camp Agricultural Committees (CACs) members, 6 farmer representatives from the District Agricultural committee (DAC), 12 cooperative chairpersons and 30 smallholder farmers. Focus group discussions were also conducted with the 30 farmers. The study used interview guides and semi structured questionnaires to collect data from key informants and smallholder farmers.

Findings and Discussion

FISP E-Voucher Beneficiaries in Choma District.

During the 2015/2016 agricultural season (E Voucher pilot), the government had planned to target a total of 24,335 beneficiaries for Choma district; however, the actual number of beneficiaries was 23,684. In the 2016/2017 agricultural season, 1,029 targeted beneficiaries were added making a total of 25,364, however, the actual beneficiaries were 23,490. There was a drop of 194 beneficiaries from 2015/16 and 2016/17 seasons. This drop in the number of beneficiaries can be attributed to late disbursements of e vouchers that discouraged the farmers from paying for the inputs when the farming season had already ended and also lack of money to pay the mandatory K400 deposit. The 1,029 e cards for the new beneficiaries were distributed to the farmers in May 2017 long after the farming season had ended.

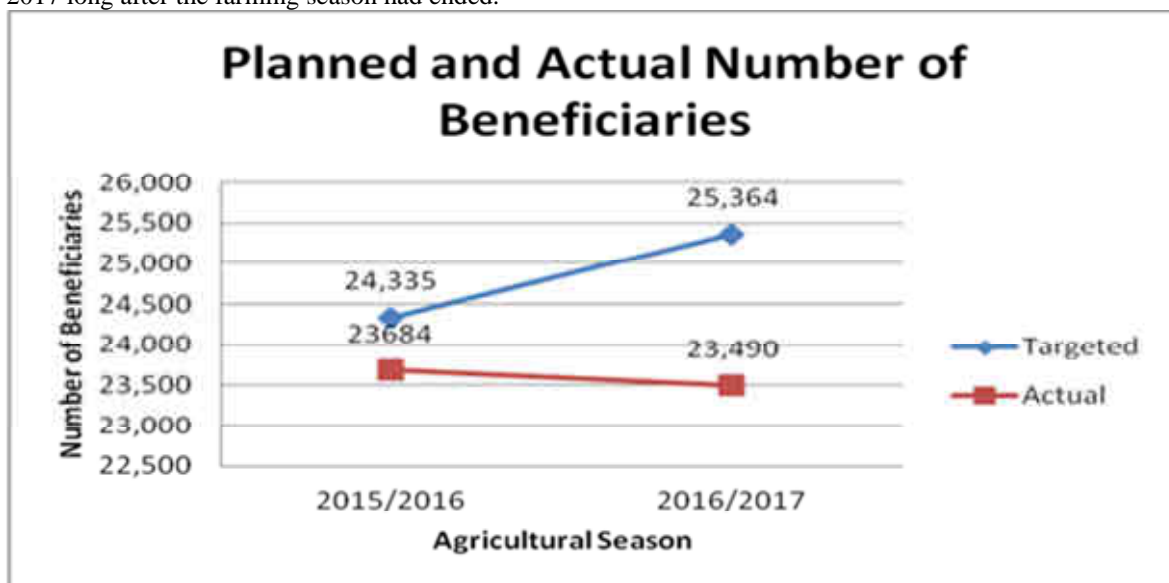


Fig 1: Electronic-voucher beneficiaries in the 2015/16 and 2016/17 Farming Season

Source:Ministry of Agriculture, Choma District 2015/16 and 2016/17 Agricultural Season FISP Wrap Up Reports

Stakeholders in the Implementation of the FISP E Voucher

There were a number of stakeholders involved in the implementation of the e voucher pilot, below is a table illustrating the stakeholders and their roles.

Table 1: Electronic Voucher Implementation Stakeholders

Stakeholder	Stakeholder Role (s)
Ministry of Agriculture	The Programme Coordinating Office (PCO) based at the Ministry of Agricultural National Office works both through provincial (PACO) and district structures (DACO ¹) including DACs and CACs. CACs-Receive applications from farmers wishing to benefit from the E voucher through farmer organizations; approve farmers to benefit from the E voucher by endorsing the list of applicants for inputs; publicize lists of successful applicants at the offices of CEOs and BEOs, monitor the distribution and utilization of inputs at the Camp level. The DACs are involved in the ratification of applications from CACs and also appraisal of farmer organizations.
Zambia National Farmers Union (ZNFU)	Provided the electronic platform on which the e-voucher operated.
Musika	Responsible for awareness and training (capacity building) of agro-dealers and input suppliers
Input Suppliers and Agro dealers	Stock and supply agricultural, livestock and fisheries inputs to farmers.
Banks	Printed e-cards in coordination with the PCO and managed the subsidy bank accounts

Source: Ministry of Agriculture, Electronic Voucher Implementation Manual for the 2015/2016 Agricultural Season.

Targeting

The District Agricultural Committee (DAC) and the 27 Camp Agriculture Committees (CAC) did targeting of beneficiaries. The composition of the DAC includes farmer representatives from the each of the agricultural blocks in the district, representative from the District Cooperative Union Zambia National Farmers' Union, Choma District Council, Office of the President (Special Division), Anti-Corruption Commission, Ministry of Community Development and DACO (acts as Secretariat of the DAC).

The Camp Agricultural Committee is made up of farmer representative from each zone in the camp; a chief's representative; Community Based Organizations within the camp; public officers other than Ministry of Agriculture; the Camp Extension Officer is the secretariat. The targeted farmers were the ones cultivating 1-5 ha of land, members of farmer organisations (clubs, farmers union or cooperative), had ability to deposit K400 to the banks towards the procurement of the subsidized inputs. A decentralized way of targeting beneficiaries was used through which farmer organization/cooperative boards; local leaders such as village headmen/chiefs representatives and agricultural extension officers participated. Decentralized targeting is effective for it lowers administration costs (Dorward and Chirwa, 2011; Kato, 2016).

Program Sensitization

The sensitization process was flagged off by a national sensitization meeting in Chongwe District that was attended in June 2015 by the DACO. The district sensitizations were carried out immediately after the Chongwe meeting, and this was done at 2 levels. The first meeting involved officials from the Ministry of Agriculture and Livestock, and other district stakeholders that included officers from ZNFU, Cooperatives, Choma municipal council and Office of the President special division. The second series of meetings involved farmers in their respective blocks. During these meetings issues addressed included the E-voucher programme implementation process and its modalities.

With regards to awareness, interviews with the farmers, CACs and DACs indicated that even if awareness meetings were conducted, some farmers still did not fully understand how the E-Voucher worked, especially with regards to the card activation and input redeeming process. The farmers felt that the awareness need to be more rigorous and in small manageable groups, current training in larger groups reduced the chances for effective information delivery.

Registration of Farmers and Card Distribution

During the 2015/2016 agricultural seasons, the registration of beneficiaries was done in the month of July and August after the distribution of FISP documentation to the selected farmers and farmer groups through their respective CACs. At the end of the registration process, the district submitted a database of 24, 323 for the purpose of card creation. The distribution of e-voucher cards started in September and was conducted in conjunction with Zambia National Farmers' Union (ZNFU). The distribution to the 27 camps was conducted for a period of 2 months; this also involved making repeat visits to the same camps in order to issue the cards to

¹ DACO-District Agriculture Coordinating Officer

farmers who were absent in previous visits. After the field distribution exercise, the farmers who missed the distribution team in their areas started collecting the cards from the district office. The collection of cards from the office continued till the end of December 2016. At the end of the distribution exercise 23,958 cards were distributed to farmers.

For the 2016/2017 agricultural season, registration of beneficiaries was done in the month of July and August after the distribution of FISP documentations to the selected farmers and farmer groups through their respective CACs. At the end of the registration process, the district submitted to national office a database of 25,335 registered farmers to benefit from the e voucher. The distribution of cards for new beneficiaries only happened in May 2017 after the cards were received from ZNFU. The cards were received long after the growing season had ended. The total number of new cards received was 1,029. At the end of the distribution exercise 973 cards were distributed.

The difference in the number of cards distributed from the cards received was due to the absence of owners during card distribution exercise. This absence can be attributed to genuine absence and also a result of farmers who had registered some ghost beneficiaries. However, this never worked to their favor, as each farmer was required to collect the e voucher card in person whilst availing their National Registration Card (NRC). This made it impossible to collect e-voucher cards for ghost farmers. The DAC expressed concern that this was a missed opportunity for genuine farmers who could not access the inputs. With regards to submitting wrong entries to the office, the farmers also regretted that they didn't do verification of beneficiary list at the Camp level, so some names and NRCs for selected farmers were wrong. This led to late activation of the e -cards and eventually late accessing of inputs.

Card Activation

During the 2015/2016 agricultural seasons, card activation started with the first deposits being made on the 2nd October 2015 and the last deposits were made on 9th February 2016. By the end of the card activation period, 23,684 cards were sent for activation. The figure below shows the card activation trends for the 2015/2016 agricultural season with the highest number of cards being activated in December.

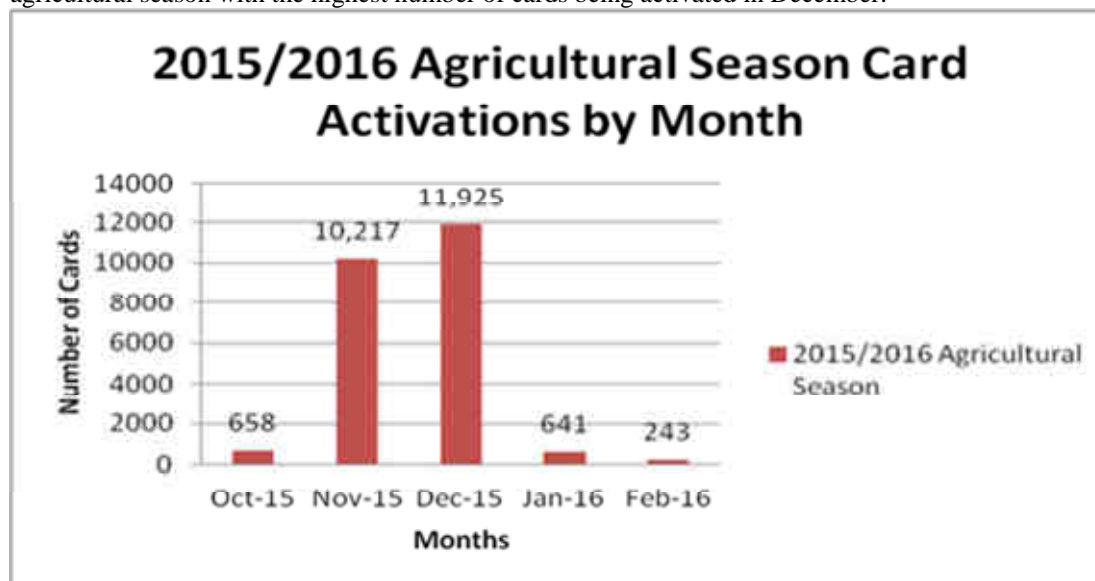


Figure 2: Card activations in the 2015/2016 agricultural season

Source: Ministry of Agriculture, Choma District 2015/2016 FISP Wrap Up Report (2017)

During the 2016/2017 seasons, the exercise started with the first farmers' deposits on the 12th December 2016 and the last deposit on 11th May 2017. By the end of the reporting period, 23,490 cards were sent for activation. The figure below shows the card activation trends for the 2016/2017 agricultural season. Compared to the 2015/2016 agricultural season in which the highest number of cards were activated in December, in the 2016/2017 season the highest number of cards were activated in January. The transacting window in the second year of the pilot was much longer than the first year mainly due to late distribution of cards.

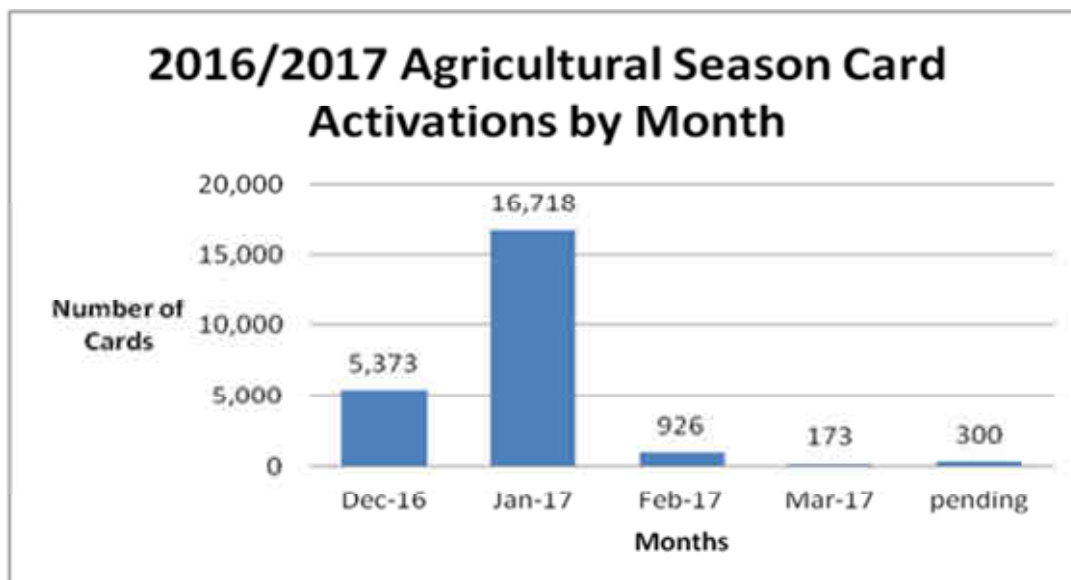


Figure3: Card Activation in 2016/2017 Agricultural Season

Source: Ministry of Agriculture, Choma District 2016/2017 FISP Wrap Up Report (2017)

Interviews with one key informant indicated that 300 cards had not been activated by December 2017, despite the fact that farmers had deposited the K400. This therefore meant that farmers could not access inputs on time for the rain season starts in early November. This was attributed to the fact that the banks had challenges in reconciling the funds they had received from government and the cards they had loaded. Other reasons given for not activating the cards was that some entries from the cards captured had errors and the banks couldn't trace the cards in their system.

Private Sector Participation in the Electronic Voucher Input Distribution

In the 2015/2016 agricultural season 31 participants that included 19 agro dealers, 4 Fertilizer companies and 8 Seed companies, participated in the electronic voucher input distribution. During the 2016/2017, the number of participants increased to 39 participants that included 4 Fertilizer companies, 8 Seed companies, and 27 Agro dealers. All these participants were based in the Central Business District of Choma while some seed companies had a few agents (individuals and Cooperatives) in the outlying areas of the district. The nearest farmers were located 5-10km from agro dealers and the furthest were 73km. The participation of agro dealers and inputs suppliers in the outlying areas was relatively low. However, it is also important to note that some agro dealers opened delivery points in remote areas such as Mapanza and Mbabala.

Input Redemption

From the interviews, information we gathered showed that the agro dealers and input suppliers had the capacity to supply adequate quantities of inputs during both agricultural seasons. As for the supply of inputs to the agro dealers, two options were available; they could either buy on cash basis if they had financial capacity or they could receive the inputs from input suppliers on credit basis. In the 2015/2016 agricultural season, 23,684 farmers successfully redeemed the inputs while in the 2016/2017 agricultural season, 23,490 farmers managed to redeem the inputs. The reduction was attributed to late distribution of e cards to farmers.

Summary of Activities in the Implementation of the E-Voucher

- a) Farmer registration in camps through CACs
- b) Approval of registration list by DAC
- c) Database of registered farmers sent to PCO for card creation
- d) Registered farmers given voucher cards by DACO and ZNFU
- e) Farmer organization request for Authority to Deposit (ATD) document from DACO amount to be deposited at the bank is also calculated in line with farmer organization's needs
- f) Farmer organization deposit funds to bank
- g) Farmer organizations take stamped bank deposit slips to DACO
- h) Lists of the farmers and deposit slips are scanned and sent to Zambia National Farmers Union in Lusaka
- i) Zambia National Farmers Union sends the List to the Bank
- j) Banks activate voucher cards based on the submitted list
- k) Voucher activation notice is sent to farmers mobile phones

- l) Farmers approach approved agro dealers to redeem the vouchers (Some go in groups and some individually).
- m) Agro dealers serve the farmers by allowing them to swipe their voucher cards with inputs of their choice that are covered under the programme
- n) After purchasing the inputs using a POS machine the subsidy amount is credited to the agro dealer's account by the contracted banks.

The Gains from E Voucher

Cost saving by the government-

The main rationale of e-voucher is that it requires limited government intervention in input subsidy program (Elijah, 2017). The government was able to save some financial resources associated with the administrative costs in the conventional FISP such as the transportation of seeds and fertilizer to farmers. For instance, in the 2014/2015 agricultural seasons, the total bill for the storage of seed and transportation of input to farmers was K1, 647, 948.47 (approx. US\$1 647 984). In the 2015/2017 and 2016/2017, government did not incur any input transportation costs; the private sector and farmers performed this task of transporting input. Private service providers were able to take up this role of transporting inputs to the farmers; some agro dealers transported the inputs for the farmers as a complimentary service for buying large quantities of inputs.

Increased Private Sector Participation-

There was an increase in private sector participation in the distribution of inputs. Local Agro –dealers and input suppliers such as chemical suppliers, fertilizer suppliers, livestock product suppliers and seed suppliers did distribution of inputs. The E- Voucher gave an opportunity to small agro dealers to partner with input suppliers; this resulted in the empowering of small agro dealers. Agro dealers also had the opportunity to open new outlets in outlying areas. Some cooperatives were empowered financially as they got the opportunity to work as agents for seed companies. For instance, Kamano Seed Company engaged three cooperatives as agents in Mbala, Mapanza and Macha camps. In addition there was creation of rural employment for school leavers who got employed by agro dealers.

Table2: Participants in the inputs supply

Agricultural Season	Fertilizer Companies	Seed Companies	Agro Dealers
2015/2016	4	8	19
2016/2017	4	8	27

Source: Field Data

Improved Service from Agro Dealers

The e-voucher brought about competition among agro dealers which prompted some of them to relocate closer to the farmers and in turn were able to redeem some inputs from their door steps. In essence the e-voucher ushered in fair chances of distribution (Elijah, 2017).

Improved Targeting-

Interviews with key informants from the Ministry of Agriculture, DACs and CACs revealed that the targeting of beneficiaries had improved compared to the Conventional FISP. The conventional FISP had a lot of ghost farmers. There was tremendous improvement in transparency and targeting of real beneficiaries. In Choma District, more than 600 ghost farmers were eliminated from the beneficiary list. The E-voucher system requires the physical presence of the farmers with their NRC during card distribution and redeeming of inputs from the agro dealers. Some farmers submitted names for family members who did not reside in the designated agricultural camps while some submitted names for deceased people. However, they were not able to collect the e-vouchers because each farmer is required to collect their voucher card in person and also show their NRC. Therefore, one can safely argue that E- voucher results in increased transparency (WFP, 2014).

Flexible Voucher

The e-voucher is in the form of a flexible voucher, this provided farmers with a choice of inputs apart from maize and fertilizer. Farmers were able to redeem herbicides, sprayers and veterinary drugs. Voucher flexibility reduces losses that are incurred when the voucher is fixed. In situation where fixed vouchers are used, farmers end up redeeming inputs that they do not need (Elijah, 2017).

Drawbacks

Mis-targetting, Collusion and Fraud

Although the programme targets small-scale farmers cultivating up to a maximum of 5 hectares of land, more

wealthy farmers cultivating more than 5 hectares were reported to have received e-vouchers, some beneficiaries were reported to be cultivating hectares ranging from 10 to 20 hectares. This problem arises from CACs not adhering to the beneficiary selection criteria. According to the selection criteria for individual farmers, the farmer should have the capacity to pay the prescribed farmer contribution towards the total cost of the e Voucher value. However, reports indicated that some selected farmers failed to raise the down payment, forcing them to sell the voucher cards to dealers and other wealthier farmers. It was reported that smallholder farmers were selling e vouchers at a cost of K500 to wealthier farmers who could afford the down payment. Indeed, the emergence of secondary markets is caused by different access to working capitals between recipients and non-recipients (Chirwa and Dorward, 2013).

A key informant had this to say: *The difference in the number of cards distributed and activated was due to some farmers who didn't deposit the down payment for different reasons. This included reasons ranging from scepticism and failure to raise the K400 deposit.*

Reports coming from FGDs further indicated that some farmers were exchanging e-voucher cards for money from agro dealers. One farmer narrated:

Some farmers were getting cash from some agro dealers instead of redeeming the e- voucher cards for the recommended agricultural inputs. The E voucher card has a value of K2, 100 (This includes the K1, 700 from the government and K400 contribution from the farmers). In this case, the agro dealers would give the farmer cash equivalent to 1,500. In other instances, if the value of the e card was not exhausted by the farmer after the redemption process, the agro dealers were giving change (cash) which was not supposed to be the case.

In some cases, the agro dealers and farmers were redeeming inputs not listed under the programme. Some farmers were swiping for commodities not recommended by the programme. For example, some farmers redeemed items such as mealie- meal and iron sheets from two mentioned agro dealers. The buying of inputs not permitted under the program can be attributed to the fact that the e-voucher system did not have a facility for capturing the data on what type of inputs the farmers had redeemed. This even made it difficult to analyse the level of agricultural diversification among farmers. The industry feels the Ministry of Agriculture should consider locking the e-voucher cards to agreed products, i.e. 10kg bag of maize seed, 50kg bag of fertilizer D compound, etc. Currently, the e cards are not locked to any products, leading farmers to redeem even products not listed under the programme.

During routine monitoring by government officials and other stakeholders it was observed that some agro dealers were engaging in fraudulent activities. Some of the agro dealers had their Point Of Sale (POS) machines confiscated and they were suspended for two weeks from redeeming inputs. Furthermore, some reports from farmers indicated that agro dealers were taking advantage of the huge demand for inputs, therefore were redeeming, particularly fertilizer at exorbitant prices. The agro dealers kept on hiking the prices and that seriously affected farmers as they ended up getting fewer inputs than expected.

Lapses in Card Delivery and Activation

There was late delivery of cards for new beneficiaries in the district. For those who had lost their pin and cards, there were delays in issuing them with new cards. Late card deliveries made the implementation period to be longer than anticipated. For example, in the 2016/2017 agricultural seasons 1,029 cards for new beneficiaries were only received in May 2017 long after the cropping season had ended yet the farmers depend on rain fed crop cultivation. The initial plan for the E voucher was to produce and distribute cards by the end of August 2016 (Musika, 2017), and allow a transacting period from September 2016 to January 2017, but the process was not finished by May 2017.

The E-Voucher FISP was associated with slow activation of the card by the banks; this resulted in some farmers accessing inputs late. In addition, the process leading to card activation was too long and time consuming especially the scanning of Authority To Deposit documents and deposit slips which had to be sent to ZNFU or Ministry of Agriculture Head Office.

In some instances, lack of money among selected farmers caused delays to the whole farmer group because the farmer groups were mandated to make deposits for all the selected members at once. However, the government later announced farmer groups could make deposits to the bank whenever members paid. Whilst, this was a noble move at the farmer group level, this created a larger amount of work for the banks officials and DACO for they had to deal with one farmer group on several occasions, as when its members had raised the K400.

Poor Funding and Late Release of funds by Treasury

Funding for district operations was very poor to an extent that some of the officers implementing the programme had to use their own funds to carry out some of the activities i.e. sourcing of internet service for sending activation requests and fuel for card the card distribution exercise. For example, the district only received a sum of K20 000 (\$2,000) for operations during the 2016/2017 agricultural seasons; this had to be shared among 27

camp extension officers, 5 block extension officers and the District Agricultural Coordinating Office (DACO). This made implementation and monitoring of the programme more difficult for the officers.

In addition there was also late release of funds by the treasury, this resulted in late commencement of e voucher implementation. Some cards took as long as 2 to 3 months to be funded despite the fact that the farmers had made the mandatory initial deposit. By May 2017, there were still some cards not credited from the 2015/2016 agricultural seasons due to delayed funding by government.

As a result of late card funding, some agro dealers made complaints of poor sales from FISP e-voucher in the district. This led to agro dealers giving inputs to farmers even before the cards were activated by the banks and in turn withheld the e voucher cards as surety for the inputs given to the farmers. It is estimated that about 1,000 cards were withheld by the agro dealers this practise of advancing inputs to the farmers backfired on the agro dealers when the voucher cards were not activated on time; this hindered the agro dealers from restocking. On the other hand, advancing of inputs also demonstrates the agency¹ of the smallholder farmers in that after realising that they were losing time to plant, they approached dealers and negotiated with them to be advanced with inputs.

Poor Stakeholders' Coordination

There was poor coordination between Ministry of Agriculture (MA), banks and ZNFU on issues of card activation. The banks were not consistent in giving feedback to DACO as to which farmers' cards were activated and not activated. Furthermore, the DACO had challenges in accessing the bank statements from the bank responsible for cash deposits from farmers though the bank was mandated to provide weekly bank statements under the e-voucher program. This led the DACO to encounter difficulties in making reconciliations.

Breakdowns of the Banking System

Towards the end of the 2016/2017 agricultural seasons, the bank system elapsed and somehow reloaded money into the e cards for farmers who had already redeemed their inputs. Farmers who had already benefited started to redeem for inputs from the agro dealers when X² banking system was compromised.

It was reported that about 6,041 farmers double swiped and it is estimated that K13, 000,000 (\$1,300,000) was involved. The farmers had started paying back the money to the bank in instalments. This compromises the bank's ability to efficiently implement the e-voucher.

Electrical power challenges

E-voucher is an electronic system that needs power hence power outages disturbed the implementation of the programme as it affected the timely transmission of data from the district to National Office. This contributed to the increased lead-time between depositing and activation of cards. At times, the district did not have electricity for a period as long as half of the day. Internet connectivity was also unreliable leading to delays in sending information for card activations.

Sustainability of the Programme and Farmer Graduation

Under the new system of e- voucher, a farmer can only benefit for three years and thereafter has to graduate or exit the program; unlike the conventional FISP where most farmers had benefited since inception of the programme. In focus group discussions farmers reported they didn't seem confident that they could manage to do farming without input subsidies. They felt that this aspect of graduation might negatively affect them, as they are still not able to independently grow crops. Their rationale is that the e voucher card value (only enough to grow 0.5 hectares of maize) under e-FISP is not enough to empower a farmer to the extent of graduating from the programme. This assertion by farmers that they may not be able or are reluctant to exit the program is interesting in that it raises questions on the future of smart subsidies whose hallmark is premised on an exit strategy as argued by Kato (2016) that key characteristics of market smart subsidies is that they are targeted at vulnerable farmers, spur private sector development and have an exit strategy.

Recommendations

Going forward a number of recommendations can be made as far as e-voucher implementation is concerned. Firstly, there is need for the Ministry of Finance to release funding in good time. The Ministry of Finance should also plan well in advance for e- voucher cards resources to avoid such situations that lead to farmers accessing their inputs late. Secondly, there should be improved coordination and feedback among implementing agents of the programme (DACO's, ZNFU and Banks). There is need for effective communication amongst all stakeholders and education for all stakeholders should be continuous. Thirdly, there is need for improved

¹ Agency is the ability to process social experience and to devise ways of coping of life, even under the most extreme forms of coercion(Norman Long,2001).

² X stands for a bank name whose identity we have concealed for confidentiality purposes.

supervision and monitoring of agro - dealers especially with regards to their adherence to the set code of conduct and business development. Lastly, more farmer awareness and trainings are needed. Training and information sharing must be done at farmer cooperatives and associations level. Farmers' training should be focused on understanding farmers' characteristics such as knowledge and attitude to risks (Dorward et al. 2013).

Conclusion

This study highlighted the key activities and stakeholders involved in the implementation of the e-voucher FISP. This study discussed issues such as beneficiary targeting, inputs distribution network, input redemption process and also the benefits and drawbacks encountered in the implementation of the e-voucher. Whilst e-voucher implementation was not challenge free, this study has noted that implementation of e-voucher is vital for improved targeting of poorer farmers, reduction of losses associated with ghost farmers, reduction of government administrative costs, crowding in of the private sector and creation of rural employment. As for the few challenges noted such as delays in card activation, late funding of the cards and emergence of unscrupulous agro dealers, this study recommended robust coordination among stakeholders and tighter enforcement of the code of conduct on agro dealers among others.

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Disclosure statement

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